

GOVERNMENT OF INDIA

DEPARTMENT OF ARCHAEOLOGY

CENTRAL ARCHÆOLOGICAL
LIBRARY

CALL No.

723.31/BYI

ACC. No.

20081

D.G.A. 79

GIPN—84—2D. G. Arch. N. D. 57—25-2-58—1,00,000

PRINTED BY
Oriental Book Press
6, Gendia Street, Calcutta
INDIA

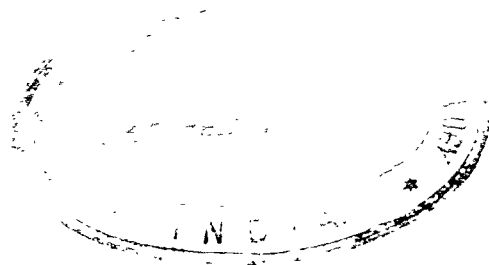
1

2

3

1-1-80

MUHAMMADAN ARCHITECTURE
IN
EGYPT AND PALESTINE





Photograph: American Colony Stores, Jerusalem

JERUSALEM: SABĪL OF QĀYT-BĀY

In the background, the Qubbat aṣ-Ṣakhrah, or 'Dome of the Rock'

MUHAMMADAN ARCHITECTURE

IN

Egypt and Palestine

BY

MARTIN S. BRIGGS

F.R.I.B.A.

Author of 'Baroque Architecture', &c.

723.31
Bri

O X F O R D

AT THE CLARENDON PRESS

1924

5

109/1

Oxford University Press
London Edinburgh Glasgow Copenhagen
New York Toronto Melbourne Cape Town
Bombay Calcutta Madras Shanghai
Humphrey Milford Publisher to the UNIVERSITY

CENTRAL ARCHAEOLOGICAL
LIBRARY, NEW DELHI.

Acc. No. 20081.....
No. 26... 2... 55.....
Call No. 723-31/Bx.....

Printed in England

P R E F A C E

THIS book, the publication of which has been delayed by the difficult conditions of the past year, is designed to supply a want that occurred to me while serving in Egypt and Palestine during the War. It is the first attempt in English to describe the Muhammadan architecture in these countries, dealt with more briefly in the first volume of M. Saladin's *L'Art musulman* and touched on in Professor Lane-Poole's admirable handbook of *Saracenic Art*, now long out of print. The system of transliteration from Arabic that I have adopted is that laid down by the British Academy. For advice on this part of the work, as well as on many historical points, I am indebted to Sir Thomas Arnold, Professor of Arabic in the University of London. For much help in matters of architectural chronology, and for eleven photographs (Figs. 12, 14, 42, 75, 80, 132, 133, 218, 219, 233, and 245), I have to thank Mr. K. A. C. Creswell, Hon. A.R.I.B.A., now engaged on a historical survey of the Muhammadan monuments of Egypt for H.H. the Sultan. Mr. William Harvey has kindly allowed me to use his beautiful drawing reproduced on Fig. 175, and Professor Herzfeld of Berlin has lent me Figs. 18 and 19. I have to thank the Egyptian Government authorities for permission to use 41 photographs, the Director of the Victoria and Albert Museum for eight photographs, the Palestine Exploration Fund for three photographs (Figs. 46, 48, and 49), the American Colony at Jerusalem for eight photographs, the Royal Air Force for one photograph (Fig. 22), and the late Robert Williams, F.R.I.B.A., for the drawing reproduced on Fig. 26.

Of the remaining illustrations about 100 are reproduced from my own photographs and drawings, many of the plans having been based on those in published books and brought up to date. Several of my own drawings have been previously published in the *Burlington Magazine*, the *R.I.B.A. Journal*, and my book *Through Egypt in War-time* (Fisher Unwin), and for permission to use these I have to thank the respective publishers.

During the printing of this book there has appeared an important publication by Mr. K. A. C. Creswell, entitled *The Origin of the Cruciform Plan of Cairene Madrasas* (reprinted from the *Bulletin de l'Institut français d'archéologie orientale*), in which he analyses his studies among the hitherto neglected madrasahs of Syria, proving that the cruciform plan was of Egyptian origin and remained peculiar to Egypt. It is too late to embody the results of his researches in my own volume, but they have a bearing on pp. 78-9 and 108.

M. S. B.

UNIVERSITY COLLEGE, LONDON.

December 1922.

CONTENTS

	PAGE
LIST OF ILLUSTRATIONS	ix
I. THE BIRTH OF ISLAM	I
II. THE FIRST MOSQUES (A. D. 622-868).	20
III. THE MOSQUE OF IBN ṬŪLŪN AT CAIRO (A. D. 868-969)	47
IV. THE FĀṬIMIDS IN CAIRO (A. D. 969-1171)	63
V. THE ARCHITECTURE OF SALADIN AND THE IN- FLUENCE OF THE CRUSADES (A. D. 1171-1250)	76
VI. THE BUILDINGS OF THE TURKISH MAMELUKES (A. D. 1250-1382)	89
VII. THE BUILDINGS OF THE CIRCASSIAN MAMELUKES (A. D. 1382-1517)	110
VIII. ARCHITECTURE AFTER THE TURKISH CONQUEST IN A. D. 1517	132
IX. DOMESTIC ARCHITECTURE	145
X. THE NATURE OF SARACENIC ORNAMENT	165
XI. CRAFTSMANSHIP: STONE, MARBLE, AND STUCCO	184
XII. CRAFTSMANSHIP: WOODWORK	203
XIII. CRAFTSMANSHIP: METALWORK, GLASS, AND CERA- MICS.	220
XIV. CONCLUSION	235
GLOSSARY	245
INDEX	247

There is a bibliography at the end of each chapter, that on pp. 18, 19 including general references to the subject of this book.

LIST OF ILLUSTRATIONS

FIG.		PAGE
	Jerusalem. Sabil of Qāyt-Bāy	<i>Frontispiece</i>
1.	The sanctuary of a mosque. (Cairo. Mosque of 'Amr ibn al-'Aṣ)	<i>To face</i> 20
2.	A typical minaret. (Cairo. Mosque of al-Azhar)	21
3.	A typical mihrāb and mimbar. (Cairo. Madrasah of Barqūq)	21
4.	Khārigah Oasis. A village minaret	22
5.	Aghurmi (Sīwah Oasis). A minaret	23
6.	Jerusalem. The Haram ash-Sharīf and the Dome of the Rock	<i>To face</i> 32
7.	The Qubbat aṣ-Ṣakhrāh. Exterior	32
8.	Interior	33
9.	Haram ash-Sharīf. Plan	35
10.	The Qubbat aṣ-Ṣakhrāh ('Dome of the Rock'). Interior <i>To face</i>	36
11.	Mosque of al-Aqṣā. Interior	36
12.	Damascus. The Great Mosque. Court	37
13.	Treasury in Court	37
14.	S.W. angle of Court	37
15.	Plan (after Dickie).	41
16.	The 'Arūs Minaret	42
17.	Cairo. Mosque of Ibn Ṭulūn. Plan	50
18.	Sāmarrā. Great Mosque. Plan	53
19.	Details of Construction	54
20.	Cairo. Mosque of Ibn Ṭulūn. Detail of exterior <i>To face</i>	54
21.	Mihrāb and mimbar	54
22.	Sāmarrā. The Great Mosque. View from the air	54
23.	Cairo. Mosque of Ibn Ṭulūn. Courtyard	55
24.	Aisle of chief liwān.	55
25.	Arcade in chief liwān	56
26.	Principal mihrāb	57
27.	Mosque of Al-Azhar. Court	68
28.	Principal liwān	69
29.	Mosque of Al-Hākim. Plan	69
30.	Court and minaret <i>To face</i>	70

FIG.		PAGE
31.	Cairo. Mosque of Al-Hākim. Minaret	<i>To face</i> 71
32.	Bāb an-Naṣr	71
33.	Bāb Zuwaylah	71
34.	Bāb al-Futūh	71
35.	Mosque of Al-Juyūshī. Plan	71
36.	Al-Azhar. Fāṭimid dome	<i>To face</i> 72
37.	Mosque of Al-Juyūshī. Exterior	72
38.	Dome over Mihrāb	72
39.	Mosque of Al-Aqmar. Façade	73
40.	Mosque of Ṭalā'ī aş-Şāliḥ. Entrance to principal liwān	73
41.	Mosque of Al-Aqmar. Plan	73
42.	Aleppo. The Citadel	<i>To face</i> 80
43.	Jerusalem. St. Stephen's Gate	80
44.	A street fountain	80
45.	Cairo. The Citadel	80
46.	Gaza. The Great Mosque. Interior	81
47.	Jerusalem. Chapel of the Virgin's Tomb	81
48.	Ludd. Church of St. George	81
49.	Gaza. The Great Mosque. Crusader doorway	81
50.	Plan	83
51.	Jerusalem. A street fountain	84
52.	Cairo. Mosque of Baybars I (Zāhir). Plan	96
53.	S.W. Porch	97
54-56.	Details of N.W. Porch	<i>To face</i> 98
57.	Small mosque of Baybars I. Detail of doorhead	99
58.	Mosque of Baybars I. Detail of window	99
59.	Detail of S.W. porch	99
60.	Madrasah and mausoleum of Qalāwūn. Plan	99
61.	Mausoleum of Qalāwūn. Interior	<i>To face</i> 100
62.	Exterior before restoration	100
63.	Mosque of an-Nāṣir, in the Citadel. Exterior	101
64.	Court	101
65.	Dome	101
66.	Detail of Arcade	101
67.	Plan	101
68.	Madrasah of Zayn ad-Dīn Yūsuf. Sketch-plan	102
69.	Damascus. A door-head	<i>To face</i> 102
70.	Cairo. Bath of the Amīr Bashtāk. Doorway	102
71.	Madrasah and mausoleum of an-Nāṣir (<i>intra muros</i>). Doorway	102
72.	Mosque of the Amīr Almas. Dome	103
73.	Madrasah of Zayn ad-Dīn Yūsuf. Dome	103

LIST OF ILLUSTRATIONS

xi

FIG.			PAGE
74.	Cairo. Mausoleum of Shajar ad-Durr. Dome	To face	103
75.	Mausoleum of an-Nāṣir (<i>intra muros</i>) . . .	. . .	103
76.	Madrasah of Salār and Sanjar al-Jāwli. Plan	. . .	104
77.	Ramlah (Palestine). Minaret of the ' White Mosque ' . . .	To face	104
78.	Jerusalem. Mawāzin in the Haram ash-Sharīf	. . .	104
79.	Cairo. Madrasah of Salār and Sanjar al-Jāwli. Exterior. . . . .	. . .	104
80.	Jerusalem. The Bāb al-Qaṭṭānīn . . . . .	. . .	104
81.	Cairo. Madrasah of Sha'bān. Dome . . . . .	. . .	105
82.	Madrasah of the Amīr Sargitmish. Dome . . . . .	. . .	105
83.	Madrasah of Zayn ad-Dīn Yūsuf . . . . .	. . .	105
84.	Madrasah of Sultan Ḥasan. Plan . . . . .	. . .	106
85.	Ṣaḥn . . . . .	. . .	107
86.	Exterior	To face	108
87.	Interior Court . . . . .	. . .	108
88.	Miḥrāb and Mimbar . . . . .	. . .	108
89.	Doorway in Sanctuary . . . . .	. . .	109
90.	Portal . . . . .	. . .	109
91.	Mausoleum of Baybars II . . . . .	. . .	112
92.	Mausoleum of the Amīr Ṭarā-Bāy . . . . .	. . .	113
93.	Madrasah of Barqūq (<i>intra muros</i>). Plan . . . . .	. . .	114
94.	Exterior	To face	114
95.	Interior . . . . .	. . .	114
96.	Details of Sanctuary . . . . .	. . .	114
97.	Mausoleum of Barqūq and Faraj (<i>extra muros</i>) Exterior from East . . . . .	. . .	115
98.	Dome in Mausoleum . . . . .	. . .	115
99.	Arcades in W. Liwān . . . . .	. . .	115
100.	Plan . . . . .	. . .	115
101.	Exterior from West . . . . .	. . .	116
102.	Mosque of Mu'ayyad. Court (ṣaḥn)	To face	116
103.	Sanctuary or principal liwān . . . . .	. . .	116
104.	Minarets . . . . .	. . .	117
105.	Mosque of Al-Azhar. Bāb al-Muzayinnīn . . . . .	. . .	117
106.	Mausoleum of Barqūq and Faraj (<i>extra muros</i>) Ṣaḥn and minaret . . . . .	. . .	118
107.	Khān Yūnus, near Gaza. Ruined Mosque . . . . .	. . .	119
108.	Cairo. Mausoleum of Barsbāy (<i>extra muros</i>)	To face	120
109-10.	Cairo. Domes of Tomb-Mosques in the Qarāfah . . . . .	. . .	120
111-12.	Jerusalem. Pulpit of Qāḍī Burhān ad-Dīn . . . . .	. . .	121

FIG.		PAGE
113.	Damietta. Mosque of al-Mu'inī. Interior . . .	122
114.	Cairo. Madrasah of Qāyt-Bāy (<i>extra muros</i>). Interior <i>To face</i>	122
115.	Exterior . . .	123
116.	Madrasah of Qāyt-Bāy (<i>intra muros</i>). Interior . . .	123
117.	Madrasah of Qāyt-Bāy (<i>extra muros</i>). Plan . . .	124
118.	Madrasah of Jānim al-Bahlawān. Plan . . .	125
119.	Madrasah of Abū-Bakr ibn-Muzhir. Interior <i>To face</i>	126
120.	Madrasah of Qānī-Bāy, Amīr Ākhūr. Exterior . . .	127
121.	Interior . . .	127
122.	(‘Abbāsiyyah). Mausoleum of Tūmān-Bay. Exterior . . .	127
123.	Alexandria. Fort Qāyt-Bāy . . .	127
124.	Cairo. Mosque of the Amīr Qajmās al-Ishāqī. Plan . . .	127
125.	Madrasah and Mausoleum of Al-Ghūrī. Plan . . .	128
126.	Mausoleum of Al-Ghūrī. Portal . . . <i>To face</i>	128
127.	Madrasah of Al-Ghūrī. Interior . . .	128
128.	(‘Abbāsiyyah). Fadawiyyah Mausoleum . . .	129
129.	Mosque of the Amīr Aqsunqur . . .	129
130-31.	Typical Domes in the ‘Tombs of the Mamelukes’ . . .	129
132.	Damascus. Takiyyah of Sultan Salīm. View from court . . .	132
133.	Portico or narthex . . .	132
134.	Exterior . . .	133
135.	Interior of portico . . .	133
136.	Detail of Minaret . . .	133
137.	Lay-out Plan . . .	136
138.	Cairo. Mosque of Sinān Pāshā at Būlāq. Plan . . .	138
139.	Damietta. Mosque of az-Za‘farānī. Minaret . . . <i>To face</i>	138
140.	Rosetta. Mosque of Muḥammad al-Abbāsī . . .	138
141.	Cairo. Sabil of Ibrāhīm-Bāy . . .	138
142.	Mosque of Sinān Pāshā at Būlāq. Exterior . . .	138
143.	Mosque of al-Malikah Ṣafiyyah. Court . . .	139
144.	Damietta. Mosque of al-Bahr. Doorway . . .	139
145.	Rosetta. Mosque of ‘Alī al-Maḥallī. Doorway . . .	139
146.	Cairo. Mosque of al-Malikah Ṣafiyyah. Sanctuary . . .	139
147.	Plan . . .	139
148.	Adrianople. Mosque of Salīm II . . .	140
149.	Alexandria. A doorway in the Old Town . . .	141
150.	Cairo. Near the Citadel . . .	143
151.	Mosque of al-Burdaynī. Exterior . . . <i>To face</i>	144
152.	Interior . . .	144
153.	Damascus. A Street Fountain . . .	145
154.	Cairo. Sabil of ‘Abd ar-Raḥmān Katkhudā . . .	145

LIST OF ILLUSTRATIONS

xiii

FIG.		PAGE
155.	Cairo. Courtyard of an old house	<i>To face</i> 148
156.	Lattice-windows in an old house	148
157.	House of Jamāl ad-Dīn. Courtyard (<i>hosh</i>)	149
158.	Great Hall (<i>qā'ah</i>)	149
159.	Plan of a typical house : Second floor	150
160.	First floor	150
161.	Ground floor	150
162.	The so-called ' <i>Bayt al-Qāḍī</i> '	156
163.	House of Ibrāhīm al-Anṣārī. Doorway	159
164.	Rosetta. A street	<i>To face</i> 160
165.	A typical Delta town	161
166.	Cairo. Old houses on the Khalīj Canal	162
167.	Rosetta. Old house	162
168.	Damascus. House of 'Abdallāh Pāshā. Court	162
169.	Great Hall	163
170.	A house in the Turkish style	163
171.	Khān Asad Pāshā. Interior	163
172.	Cairo. Mausoleum of Baybars II. Joggled lintols	188
173.	Madrasah of Barqūq (<i>intra muros</i>). Joggled voussoirs	188
174.	Mausoleum of Baybars II. Joggled step	189
175.	Jerusalem. Porch of a school.	192
176.	Cairo. Typical parapets	193
177.	Damascus. Khān Asad Pāshā. Door-head	<i>To face</i> 194
178.	Cairo. A typical dome	195
179.	Madrasah of Qāyt-Bāy (<i>extra muros</i>). Dome	195
180.	Setting-out of a typical dome	196
181.	Doorway in Shari'a an-Naḥḥāsīn	<i>To face</i> 196
182.	Madrasah of Salār and Sanjar al-Jāwli. Pierced stone screen	196
183.	Mosque of 'Abd ar-Raḥmān Katkhudā. Carved ornament	196
184.	Madrasah of Salār and Sanjar al-Jāwli. Pierced stone screen. Detail	196
185.	Mosque of Jamāl ad-Dīn Yūsuf al-Ustādār. Qamariyyah	197
186.	Mosque of Qūṣūn. Qamariyyah	197
187.	Carved stonework in Shari'a Marassina	197
188.	Mosque of Ibn Ṭulūn. Stucco panel on E. arcade	197
189.	Arab Museum. Marble Panel	198
190.	Panels in Marble Mosaic	198
191.	Panels in Marble Mosaic	198
192.	Panels in Marble Mosaic	198

FIG.		PAGE
193.	London. Victoria and Albert Museum. Marble Fountain Basin	To face 199
194.	Octagonal Basin in Marble Mosaic	„ 199
195-98.	Cairo. Examples of pierced windows (<i>qamariyyah</i>)	200
199.	Madrasah of Sultan Ḥasan. Stucco frieze	201
200.	Stucco of the Qāyt-Bāy period	To face 202
201.	Stucco panel in the French Consulate	„ 202
202.	Jerusalem. 'Dome of the Rock.' Stucco and Mosaics in Dome	„ 203
203.	Madīnat al-Fayyūm. Mosque of Princess Aṣal Bāy. Interior	205
204.	Cairo. Examples of Mushrabiyyah.	212
205.	Cairo. Examples of Mushrabiyyah.	213
206.	Damascus. Khān Asad Pāshā	214
207.	Cairo. Old Houses with Mushrabiyyah	To face 214
208.	Arab Museum. Inlaid door from tomb of Mu'ayyad	„ 215
209.	Inlaid door from the tomb of the mother of Sha'bān	„ 215
210.	Carved panel	„ 216
211.	Carved ceiling	„ 216
212-13.	Carved panels	„ 216
214.	Mosque of al-Burdaynī. Detail of side of an inlaid mimbar	„ 217
215.	Madrasah of Barqūq (<i>intra muros</i>). Inlaid <i>kursī</i>	„ 218
216.	Arab Museum. <i>Kursī</i> of inlaid wood	After fig. 215
217.	<i>Kursī</i> of carved wood	„ 215
218.	Cairo. Mausoleum of Barqūq (<i>extra muros</i>). Pierced wood screen	„ 215
219.	Mosque of al-'Aynī. Wooden ceiling with carved 'stalactites'	„ 215
220-23.	Arab Museum. Examples of carved wood friezes	„ 219
224.	Side of a carved wood cenotaph	„ 219
225.	Wooden <i>mihrāb</i> (prayer-niche)	To face 219
226.	Back of wooden <i>mihrāb</i>	„ 219
227.	Top of <i>kursī</i> illustrated on Fig. 229	„ 222
228.	Top of <i>kursī</i> illustrated on Fig. 230	„ 222
229-30.	<i>Kursī</i> of copper, inlaid with gold and silver	„ 222
231.	London. Victoria and Albert Museum. Damascened mosque-lamp from Cairo	„ 223
232.	Metalwork from Mosque of Baybars I, Cairo	„ 223
233.	Damascus. Great Mosque. Metalwork on west door	„ 226

LIST OF ILLUSTRATIONS

xv

FIG.		PAGE
234.	Cairo. Mosque of Mu'ayyad. Metalwork on door	<i>To face</i> 226
235.	Madīnat al-Fayyūm. Mosque of Princess Aṣal Bāy	226
236.	Cairo. Mosque of Jawhar al-Lālā	226
237-40.	Arab Museum.	
	Enamelled glass mosque-lamps	227
241-44.	London. Victoria and Albert Museum.	
	Stained glass windows from Cairo	230
245.	Jerusalem. 'Dome of the Rock.'	
	Tiling round drum of dome	231
246.	Damascus. A tiled fountain	231
247-48.	Jerusalem. 'Dome of the Rock.' Specimen tiles	232, 233
249.	Cairo. Mausoleum of Barqūq and Faraj (<i>extra muros</i>).	
	View in sanctuary	<i>To face</i> 236
250.	A typical street scene	237
251.	Alexandria. A typical corner of the Old Town	238
252.	Province of Fayyūm. The tomb of a village <i>shaykh</i>	243

THE BIRTH OF ISLAM

THOUGH it cannot be claimed that the date of Muḥammad's birth in Mecca, in A. D. 570, forms in itself a definite landmark in the history of art, it is generally admitted that one result of his remarkable career was to lay the foundation of a power, spiritual and temporal, that spread over a large part of the civilized world within a century after his death, and soon created from the varied talents of the conquered nations an entirely new architectural style.

Several writers have dealt with these artistic achievements, some treating them as a whole, others taking one or two neighbouring countries and dealing with their works of art as a separate theme. In this volume only two provinces—Egypt and Syria—are considered, though the common origin of the movement applies to all the vast Empire of the Caliphs, and reference is made to parallel development in other Muslim states.

The 'Syro-Egyptian' school, as it has been termed by some authorities, is one of five main branches of Muslim art. One of the others includes Spain and Northern Africa, or, as the French concisely style it, 'Moghreb'. The second comprises Mesopotamia and Persia, the third India, and the fourth Turkey. Besides these main groups, there are smaller centres of Muslim art in Sicily, Turkestan, China, and elsewhere.

In every case these groups are differentiated by local characteristics, due to the varied nature of the older civilizations on which the new art was grafted. In India especially this older tradition was so strong that even the devastating faith of Islam was content to accept much of the religious art of the Hindu inhabitants, and merged its own identity to a larger extent than usual in the architectural fusion that followed.

Alike in their far-reaching earlier history, in the record of their Christian civilization before the Arabs swept over them, in their fortunes during the early glories of the Caliphate, in the days of Saladin and the Crusaders, and finally under the brilliant era of the Mamelukes in Cairo, Syria and Egypt have been so closely connected that there is every reason why their art should be studied as a whole. There the art of the Muslims maintained a sobriety unequalled in any of its other forms, and there we see in Cairo the city which most of all retains the picturesque and mediaeval appearance of a great Muslim capital.

Lastly, Egypt and Syria, as the scene of the most spectacular campaign in the recent war, have acquired a new unity, as well as a new significance for all men of English birth.

But though two or three English writers, and many more of other nations, have written on this subject during the past half-century, no agreement has been reached as to its proper title. A comparison of some fifteen works before me shows that an equal number of authorities prefer 'Arab' or 'Saracenic' art, while a rather smaller number use the term 'Muslim' or 'Muhammadan'. The first of these names indicates very truthfully that the new forms of art dated from and were entirely due to the conquest of various countries by the Arabs of the Hijāz. On the other hand it is urged, with some justification, by Lane-Poole, Spiers, Fergusson, and Rivoira, that the Arabs had no architectural knowledge whatever, that they invariably employed natives of the conquered countries to design and construct their buildings, and that these natives were more often than not of Christian birth. 'What they [the Arabs] carried', writes Rivoira, 'was the scimitar and the Qur'ān; . . . at the same time satisfying their insatiable lust for plunder and rapine.'

M. Saladin, whose book still stands as the most complete study of the subject as a whole, entitles it *Manuel d'art musulman*. He attributes the success of Muslim art to the great unifying and directing power of the Muslim faith: 'Une seule discipline s'étendit par la vertu d'une foi unique.' Yet only a few paragraphs later he admits the Arab genius:

'La civilisation musulmane, à laquelle ont travaillé tant de peuples différents, n'est pas purement arabe. Elle est aussi, suivant les modèles dont elle s'est inspirée et les milieux où elle a grandi, grecque, persane, syrienne, égyptienne, espagnole, indoue; mais s'il faut faire la part de tous, on ne peut nier que, sans avoir été jamais exactement définie jusqu'ici, celle des Arabes ne soit la plus grande. De tant d'éléments divers, fondus en un amalgame homogène, ils ont su faire naître une civilisation qui porte la marque de leur génie.'

In his choice of a title he is supported by Rivoira and by Spiers, but the objection cited above, that so many architects and craftsmen employed by the Muslims were themselves Christians, applies also in this case.

The third term, 'Saracenic', is almost equally open to criticism. At the time of the Crusades, the Muslim hosts were almost always known as the Saracens, so that the word has become synonymous with the Muhammadan nations of the East in the Middle Ages. Gayet,

who writes of *L'art arabe* with the light touch characteristic of the accomplished French critic, wittily suggests that, if we are to speak of 'Saracenic art', we might as well classify the German architecture of the sixteenth century as *lansquenet* and label that of Louis XIII as *mousquetaire* ! For in each case the nickname was given to a band of marauding freebooters by their enemies. 'Saracen' is said by some to have implied those doughty Muslim knights who gave so much trouble to Godefroy de Bouillon and to Amalric. But centuries earlier it was applied by the Greeks and Romans to the wild nomad tribes west of the Euphrates whom they called Σαρακηνοί (*Saraceni*). It is suggested that this name may have meant 'The People of the East' (from the Arabic *sharq* = rising sun).

The fact of the word being a nickname is not sufficient to put it out of court. We have accepted 'Gothic' and 'Baroque' among our most important terms in architectural history, just as such names as 'Whig', 'Tory', and 'Quaker' came to mean something very definite in our national life. Spiers, though an admirer of Fergusson in most things, declines to follow him in this case, and objects that 'Saracenic' cannot be applied to Muslim architecture in Spain, Persia, or Turkey, and only as 'Indo-Saracenic' in India.

Yet the two English writers who have devoted any adequate treatment to the subject, Fergusson and Lane-Poole, have both elected to use this nickname :

'The mediaeval ring of the term Saracenic—which recalls the "proud Sarrasin" of the ballads, the *Sarrasina* artist of Italy, the Bysant *Saracenatus* of the Crusaders, and the stuff *Saracenatum*, or, as we spell it, "sarcenet"—is especially appropriate to the art about to be described. Saracenic art possesses an unmistakable style, which is instantly recognized wherever it occurs, from the pillars of Hercules and the Alcazar of Seville to the mosques of Samarkand and the ruins of Gaur in Bengal ; and this style was developed and brought to perfection in the Middle Ages. The word Saracenic, implying the two ideas of Oriental and mediaeval, exactly fulfils the conditions of a general term for the art with which we are concerned.'¹

With this opinion I am in complete agreement, especially when the name is applied to the two countries included in the scope of the present work, the countries where our Crusading ancestors fought and died. But in deference to the almost unanimous opinion of recent eminent scholars, who recognize a common kinship in the architecture

¹ S. Lane-Poole, *The Art of the Saracens in Egypt* (1886), p. v.

of Islam from Morocco to Cathay, and see in its characteristic features the reflection of a common religious faith, I have waived personal preferences in favour of the title that my volume now bears.

Before proceeding to a detailed examination of the architectural requirements and the first buildings of the early Muslims, it is necessary to consider the two factors that brought them into being : the nature and progress of the Islamic movement, and the state of architecture in the Near East at the time of the Arab conquests.

The land of Arabia is almost as unfavourable to the human race as any part of the world. Consisting, as it now does and for long has done, almost entirely, of a waterless and barren desert, it reduces life to a hard struggle for bare existence and offers every obstacle to any form of civilization. Up to recent years it was believed that its inhabitants in the sixth century B.C. lived almost exactly as do the modern *Bedouin*, from Baghdād to Morocco, at the present day, their existence varying only with their capacity for forming settlements. In some cases they would be literally nomads, driving their flocks and herds from one scanty pasture to another, or leading great caravans of camels from India and Mesopotamia to Egypt and Libya, or even, as Gayet says, ' simply robbers '. As with their descendants to-day, their worldly wealth would consist chiefly of their camels, then of their goats ; and of other property they would probably possess little besides their black tents, a few earthenware pots, and their weapons of warfare. The remaining necessities of life were supplied by occasional date-palms, and the constant quest for shade and water occupied most of their energies. But the recent remarkable researches of Lammens¹ have shown that this view is in part erroneous, that their existence was less nomadic than has been supposed, and that in many fertile districts they led a settled and comfortable life.

In the more favourable localities the nomads tended to become settlers, partly for mutual protection, partly because such settlements were naturally planted in the neighbourhood of oases, springs, and pastures. Yet even in these towns their rough dwellings could hardly be regarded as buildings and certainly not as architecture. Hardly even in Greenland could more forbidding conditions be found for the birth of a great movement in art.

In one respect only did the life of the Arabs in the sixth century differ from their life in the twentieth century. Before the rise of Islam they were idolaters, now they are almost invariably fanatical Muslims. The primitive inhabitants of Arabia believed in the existence of ' jinns ', spirits good or evil. The good jinns were known as ' effreets ', the bad jinns as ' ghouls '. When a dust-storm swept over the desert,

¹ See Lammens, *Le Berceau de l'Islam* (Rome, 1914).

making life unbearable while it lasted, the work of a bad jinn was recognized.

The religious centre of Arabia was Mecca, which had become a place of pilgrimage centuries before the time of Muḥammad. Its reputation rested on a celebrated shrine, the Ka'bah, which is connected by various legends with the wanderings of Hagar and Ishmael, with Abraham, and with the angel Gabriel. Adjoining the Ka'bah was the miraculous well of Zamzam. In its earlier days the Ka'bah had been the centre for a comparatively pure form of worship, akin to the faith of Abraham himself. This however had degenerated into idolatry by the end of the sixth century, though many Jews and Christians still practised their own faith among the Arabs. The guardianship of the Ka'bah had for more than a hundred years before the birth of Muḥammad been in the hands of a privileged tribe, the Quraysh, and it was of this priestly line that Muḥammad himself was born, in A.D. 570. His birthplace thus was a city of pilgrimage, whose three hundred and sixty-five idols were in the keeping of his own family and whose prosperity depended as much on its central shrine as did that of Ephesus, long before, on the temple of Diana. It is strange that at the present day the city of Mecca, the well of Zamzam, and the building of the Ka'bah, are the objects of pilgrimage to hundreds of thousands of pious Muslim pilgrims from all over Northern Africa and the Near East. Each year steamers from Egypt and a railway from Damascus carries these devout travellers to that 'Ḥijāz' which was so called centuries before Muḥammad was born.

The incidents of his life have formed the theme of many volumes and for the most part have no bearing whatever on my subject. But nevertheless there were certain aspects of his amazing career that did undoubtedly affect the form and ritual of the faith that he founded, and so indirectly influenced the buildings that followed in the wake of the Muslim conquests. Both he and his father 'Abdallāh were by occupation guides or leaders of caravans. 'Abdallāh died at Gaza, then a celebrated Christian city with many fine buildings and still more celebrated schools, a few months before his son was born. Muḥammad himself travelled up and down the present Pilgrims' Road to Syria, halting *en route* at Boṣrā and other great Christian cities of the Ḥawrān, where he would see the magnificent sixth-century architecture whose ruins still adorn those silent plains to-day. So though he was, like most men of his race, unable to read, he must have seen much of Syrian civilization, and had gained some knowledge of Christianity and also of the traditional Jewish faith. Marriage with a wealthy widow when he was twenty-five years of age did not at first alter his occupation, but as time went on he became more and more engrossed in a quest

for a more simple and genuine religion than was practised in his native town. In turning towards the purer and grander faith of Abraham he was no doubt only following a line of thought in common with many other thinking men of his day, but his powerful personality soon drove him to assume the mantle of a prophet. For years he retired at intervals to the solitude of the desert, where he saw visions. A few friends in Mecca were initiated into his new beliefs, and about A.D. 613 at a banquet in that city he publicly proclaimed his faith, a faith which would obviously be in direct conflict with the idolatrous practices on which the whole prosperity of Mecca rested.

The chief feature of Muslim ritual was and is the regular system of five prayers a day at stated hours. No special day was set apart by Muḥammad to correspond with the Jewish sabbath or the Christian Sunday, though Friday had been the recognized day for gatherings long before his time. Other developments in ritual affecting architectural planning are considered in the next chapter. The Muslim idea of a sensual paradise may have been partially borrowed from earlier rabbis and magi. The gardens and running streams of Damascus are said to have inspired Muḥammad's view of heaven, and the burning heat of the waterless desert suggests, to every weary traveller in the East, the human ideal of hell. With the actual doctrines of Islam this volume is not concerned, but it is worth while noting that some architectural writers have seen in the Muslim's view of the transitory value of human life an explanation not only of the readiness with which he faces death in battle, but also of the lack of permanence in many of his most gorgeous buildings.

Muḥammad's declaration of his faith naturally led to hostile demonstrations on the part of his fellow-citizens. For many years he lived the life of an outlaw. He unsuccessfully endeavoured to enlist sympathy in Ṭā'if (where, by the way, he might see Persian craftsmen from the court of King Chosroes erecting new buildings), and finally accepted the invitation of some of his followers in the neighbouring city of Medina to make his home there. Here he settled in A.D. 622, afterwards known as the year of the Hījah (= migration), the date from which the Muhammadan calendar commences. His time was now divided between religious duties and guerrilla warfare, sometimes taking the form of highway robbery, with his enemies, chief among them the men of Mecca. But he was now imbued with ideas of temporal power, and even unsuccessfully challenged the Imperial troops on the frontier of Palestine. The mosque at Medina was the centre of a movement that grew in importance every day. Mecca fell before the Prophet's standard *c.* A.D. 630, and two years later he died, having created a faith and an army that soon swept over the greater part of Northern Africa and Western Asia.

The successor of the Prophet, and thus the temporal head of the Muslim world, was known as the Caliph. As the new power became a great empire the Caliph was assisted by a *diwān* or department of the Exchequer. This became necessary in view of the rapidity of the first conquests. Within six years of Muḥammad's death the Persians were defeated in Mesopotamia and their capital city, Ctesiphon, captured; the army of the Byzantine Emperor Heraclius was defeated in the Yarmūk valley; the Christian cities of Damascus, Pella, Homs, Edessa, and Aleppo—with its strong castle—taken. Then fell Antioch, the luxurious and beautiful Imperial capital in the East, and next Jerusalem was surrendered by the Christian patriarch to the Muslim Caliph Omar. The latter laid down conditions as to future church-building in the city by the Christians, and himself laid the foundations of the mosque that still bears his name. The whole of Mesopotamia was next subdued, and the new Muslim cities of Baṣrah and Kūfah were founded.

Following immediately on these conquests came the Arab invasion of Egypt c. A.D. 640, under the general 'Amr. Egypt, like Syria, was a wealthy province of the Empire and a seat of Christian civilization. 'Amr was acquainted with its attractions, for he had visited Alexandria in his youth. Starting on his campaign from al-'Arish, the frontier town of Egypt and Palestine, he crossed the sand-dunes of Sinai (so familiar to a British army in 1917) in December 639. At the fort of Pelusium he was delayed a month by the resistance of the Imperial garrison, and again at Bilbays, but reached the site of modern Cairo shortly afterwards and took up a position near the strong Roman fortress, still in part visible in the present suburb of Old Cairo. Reinforcements arrived from Arabia, and a pitched battle on the sandy plain of Heliopolis made 'Amr master of the town, though the garrison held out in their castle till the spring of 641. Two months later the Muslims had fought several battles outside Alexandria, and had concluded a curious treaty by which they were permitted to take possession of it in September 642.

Alexandria was at this time one of the wealthiest and most luxurious cities of the world, rivalled only in splendour by Byzantium and Antioch. 'Amr's dispatch to the Caliph may have exaggerated the glories of his prize:

'I have taken the great city of the West. It is impossible for me to enumerate the variety of its riches and beauty; and I shall content myself with observing that it contains four thousand palaces, four thousand baths, four hundred theatres or places of amusement, twelve thousand greengrocers' shops, and forty thousand tributary Jews.'

But whether these figures are correct or not, there is no doubt that the capture of Alexandria, with its splendid buildings and its numerous craftsmen, must have had as far-reaching an effect on the subsequent history of Muslim architecture as any event in their brilliant conquests.

‘Amr founded a mosque near the Roman citadel at Cairo, and adjoining it he laid out the new town of *Fustāt* (= the tent), while the Caliphs farther east were enlarging the mosque founded by Muḥammad round the Ka‘bah at Mecca. In spite of their dazzling successes, the Caliphs still remained, in these early years, men of frugal habits, reserving their energies to forward their ambitious schemes. Meanwhile Persia fell before their conquering arms, and as the centre of gravity of their empire had considerably changed, ‘Alī removed the seat of the caliphate in 656 to Kūfah, the new city they had founded in Mesopotamia. The story of this period is a record of constant rivalry and intrigue, one Caliph after another being assassinated.

In 661 Damascus replaced Kūfah as the capital of the Muslim world and remained so till it was supplanted by Baghdād a century later. The architectural significance of these changes, as will appear later, was considerable. In Syria the architecture was a form of Christian-Roman, and of stone construction. In Mesopotamia the buildings of the Sasanians, and their predecessors the Assyrians, naturally influenced the Muslims, but here the material used was brick. Hence the most important of the earlier mosques, erected by Ibn Ṭūlūn at Cairo in the ninth century,¹ was of Mesopotamian style though built in Egypt, and this took place after Baghdād had become the seat of the caliphs.

During the latter half of the eighth century the flood of Arab conquest was stayed for a while. An unsuccessful attempt was made to capture Constantinople, and an ambitious campaign in Northern Africa, though it carried the Prophet’s banner from Alexandria to the Atlantic and was also the occasion of the founding of Sīdī ‘Uqbah’s famous mosque² at Qayrawān near Tunis, led to serious military reverses. Meanwhile the caliphs in Damascus had instituted a mode of life very different from that of Muḥammad and his first successors. Their court was the scene of luxury and vice comparable with the most extravagant follies of Rome and Constantinople in the preceding centuries. The strict rules of the founder of Islam as to indulgence in wine had given place to gluttonous orgies, his insistence on regular hours of prayer was completely forgotten.

Yet the commencement of the eighth century found the Arabs at the very zenith of their power. In spite of insurrections in Arabia, intrigue and assassination everywhere, the Muslim armies advanced

¹ See Chapter III.

² See Chapter II.

through Persia to the fertile lands of Turkestan, and captured Bukhārā and Samarqand, destined to become in later years important centres of Arab art. They subdued the western part of Hindustan up to the River Indus, where their new province of Sind was founded. They fought their way along the coast of Northern Africa, recaptured Qayrawān, reduced Carthage after a long siege, and again reached the Pillars of Hercules.

From this base they organized their last and most sensational campaign. Crossing into Spain (A.D. 711) they attacked the kingdom of the Gothic dynasty that had ruled that country for three centuries. City after city fell before them, until at last they reached the Bay of Biscay and the Pyrenees. During these wars the caliph Walīd I (A.D. 705-15) reigned in Damascus, where he was able to gratify his natural taste for architecture and the other arts. In Cairo, in Jerusalem, and especially in his own capital,¹ he erected or enlarged mosques on a far more monumental scale than had ever been contemplated hitherto, and decorated them with all the gorgeousness dear to the Oriental mind.

But the Arabs had now reached the limits of their conquests. In 721 they crossed the Pyrenees and invaded Aquitaine. For ten years they harried all Southern France, pillaging the Roman cities of Provence, then Tours, Sens, Lyons, Besançon, and Poitiers, till finally they were overthrown in the great battle near Tours in 732 by Charles Martel. It is apt to be forgotten that the Arabs so nearly reached our own land. It was only due to the military prowess of the Frankish king that Europe was saved from the terror inspired by these savage warriors from the remote deserts of Arabia.

After their defeat they withdrew again into Spain, where a rival caliphate was established at Cordova about the same time that the main seat of government was removed to Baghdād, and at a later date yet a third caliph proclaimed himself at Qayrawān. In the pages of the *Arabian Nights* we have a vivid picture of life under Hārūn ar-Rashīd, caliph of Baghdād from 786 to 809.² Modern historians tell us that in reality the people of that dream-city must have lived in fear and trembling, for they were never far from secret plots or from the dagger of the assassin. But the marvellous tales of its beauty and splendour are probably accurate enough, for the court was surrounded with every luxury that unlimited wealth and power could bring to the mind of an Oriental despot. A monarch who would order camels laden with snow to cool the desert air around him as he made his pilgrimage to Mecca could hardly have lacked for anything in the palace where he lived

¹ See Chapter II.

² But the *Arabian Nights* is a composite production, and, as noted in a later chapter,

at least part of it is staged in Cairo of the Mameluke period.

or the mosques where he 'made his prayers'. From China to Spain, he could summon artists and craftsmen from every land to beautify his buildings, and caravans laden with costly merchandize arrived daily in his capital from every quarter of the world.

Yet of all these glories hardly a trace remains. No building now stands to commemorate the days of Hārūn ar-Rashīd, and the most magnificent achievements of Saracenic art lie elsewhere than in Baghdād. But his reign forms a fitting conclusion to this brief study of the foundation and early days of Muhammadanism.

It has already been noted that the Arabs employed native architects and craftsmen, in each country that they conquered, to design and erect their buildings. The earliest Arabs appear to have been utterly devoid of any real architectural sense, and frequently misused the various fragments of older structures that they incorporated in their new mosques. Thus they would reverse a Corinthian capital, or use it as the base of a column, or would even reverse the shaft of a column, so that its smaller diameter rested on the base. At the beginning of the eighth century the caliph ruled over so large a part of the world that it becomes necessary to study the architectural style prevailing in each separate country at the time of the Muslim conquests.

About the year of the Hijrah (A. D. 622) the Greek or Roman or Byzantine Emperor, as he is variously called, resided at Constantinople. His dominion included the provinces of Syria and Egypt, each with its distinctive and Christian architecture based on the earlier monuments of Imperial Rome. Of very different character were the buildings erected by Chosroes, the Sasanian king, who ruled over Persia and Mesopotamia and had disputed with Heraclius the sovereignty of Syria and Egypt. Farther east lay the wonderful Buddhist temples of India. Each of these great centres of artistic activity contributed something to the foundation of the new Saracenic style of architecture. But it is difficult to follow every element of that intricate art to its source or to unravel from the tangle of previous migrations and conquests each influence and tendency of local design. Learned writers have quarrelled for more than fifty years about this subject, some—like M. Šaladin—preserving a judicial impartiality, others becoming more partisan. Thus Gayet attributes the chief inspiration for Saracenic art to Coptic Egypt, Dieulafoy to Persia, while recently Rivoira wrote a book¹ to prove that practically every feature used by the Arabs was originally derived from Rome. It is my purpose to examine briefly all possible sources, rather than to follow any partisan theory of origin.

Byzantine architecture at the beginning of the seventh century had

¹ G. T. Rivoira, *Moslem Architecture* (London, 1919).

already produced its most splendid monument, the church of Hagia Sophia at Constantinople. In that city were found its other principal buildings, though its influence spread to Salonica and Athens, taking a slightly different form at Ravenna, as also in the various provincial centres of Asia Minor. Speaking generally, Byzantine architecture may be said to be an Asiatic form of the late Roman style, adapted to Christian uses. This Oriental strain in its composition would naturally make it the more easily adaptable by the Muslims when they came to face problems of design. Various features of Byzantine planning were borrowed during the earlier period of Saracenic art, but it was not until the Turkish conquest of Syria and Egypt in 1517 that such buildings as the Takiyyah at Damascus¹ were erected, frankly based on the model of the churches at Constantinople, captured by the Turks some sixty years before. M. Saladin is justified in attributing to Byzantine origin the following features used in Saracenic architecture: certain forms of vaulting, arcades resting on columns, dossierets, wooden tie-beams across arches, carved beams in carpentry, mosaic, marble linings and dados, bronze door-furniture and window-fittings, windows or *claires-voies* of pierced marble, and alternate stripes of red and white or yellow in façades and arch-voussoirs. He also adds the caravanserais or rest-houses established on main routes at distances of about fifty miles apart.

Syrian architecture was a provincial variant of the last, due partly to the necessity for buildings constructed entirely of stone, as timber was practically unprocurable. It extended from the district of Aleppo in the north to the Dead Sea in the south, and as far inland from the Mediterranean as the Hawrān. Syria already possessed long before this date some of the most important provincial monuments of the Roman Empire. The chief of these still exist at Baalbek, Palmyra, Petra, 'Ammān, Gerasa, Pella, and Boṣrā; but at Antioch, Damascus, and Jerusalem—of which the first especially was a great architectural centre—the remains are scanty. The principal buildings date from the second century A. D. and exhibit a wide range of variation, culminating in the supposed decadence of the two great temples at Baalbek. The classical orders, especially the Corinthian, were freely used in all the chief buildings. But most of the carving of acanthus foliage and other details is of the sharply-cut Greek type with deeply pierced lobes to the leaves. The Greek fret is frequently found. Local Phœnician tradition in Syria accounted for the megalithic construction adopted there by the Romans, and the familiar *trilithon* at Baalbek is one of the marvels of ancient masonry. Even in the rare cases where very large stones could not be used, joints were made so fine as to be invisible,

¹ See pp. 136-7.

thus producing the desired effect. Though timber roofs were used for peristyles and other buildings at Palmyra and elsewhere, stone was employed in vaulting wherever possible. One of the most remarkable works of this period is the Praetorium of Phaena, now known as Mismiyyah, between Damascus and Boṣrā, built about A.D. 160-9. Since it was illustrated in De Vogüé's great work,¹ it has aroused much interest among archaeologists, for some of them consider like Dieulafoy that it is a prototype of many of the Saracenic mosques of later centuries. It consists of a cruciform plan formed with columns enclosed within a square enclosing wall, the four recesses or arms of the cross roofed with barrel vaults in stone, the angles covered with flat ceilings. Wren adopted a similar treatment at St. Stephen's, Walbrook, perhaps his most skilful adaptation of a confined area. The Praetorium at Mismiyyah has an apse roofed in the form of a hemispherical scallop-shell, a feature frequently found in modified types in later Muslim work. This building was eventually utilized, in the fourth century or thereabouts, as a Christian church.

The various Roman cities mentioned above possessed a characteristic feature in their colonnaded streets. These are known to have existed at Antioch early in the second century B. C. and were afterwards found throughout Syria. The 'street called Straight' at Damascus crossed the city from gate to gate, a distance of over a quarter of a mile. There were others at Jerusalem. All the large Syrian towns were regularly laid out on a rectangular plan, the crossings of the principal colonnades being marked by great arches such as still stand at Palmyra. There was usually a large temple enclosure entered through *propylaea* such as still remain at Damascus. Streets and temple-enclosures were adorned with statues and commemorative tablets, and the theatres and other buildings found in the greater centres of late Roman art added to the general effect of magnificence. But except in details of planning and vaulting, of sculptured ornament and skilful masonry, the Arabs do not appear to have borrowed extensively from the Roman monuments of Syria.

In the sixth century another busy period of building activity occurred, lasting up to the time of the Arab invasions. Syria had now become a great Christian province, with its chief centres at Antioch and Edessa. A number of remarkable churches were erected, and some of these, at least, had an influence on Muslim architecture. The Holy Sepulchre at Jerusalem, the Church of the Nativity at Bethlehem, and many other churches in the Holy City were already existing in the days of Justinian, but he embellished them and added to their number. The 'Golden Gate' and the capitals of the columns in the mosque

¹ C. J. M. de Vogüé, *La Syrie Centrale* (Paris, 1865), p. 45 and plate vii.

of al-Aqṣà are considered by Rivoira, the latest critic, to date from his reign. The basilica at Damascus and the 'Golden House' at Antioch were built in the fourth century, when Antioch was at the height of its splendour, and had become the residence of the Emperors for a large part of their time. But it was in the Ḥawrān, the rolling country of barley-fields east of the Jordan, that some of the most interesting examples are found. Here it is said that there were once a hundred cities. The church of St. George at Ezra¹ was erected in A. D. 510-15. It consists of a cupola, ovoidal in section, carried on eight arches forming an octagon. These again are surrounded by an ambulatory, and on each of the four canted angles of the octagon is a small apse, so that the enclosing wall becomes a square, broken only by the principal apse. Rivoira points out that this plan is found centuries earlier in Rome, and considers that the remarkable dome is of later date than the rest of the church, but even if he is correct the building still retains its importance for students of Muslim architecture.

The cathedral of Boṣrā² is another noteworthy example of similar date. Much farther north, in the neighbourhood of Aleppo, is the huge convent and church of Qal'ah Sim'ān, of the fifth century. Here the church is cruciform.³ Other examples illustrated by De Vogüé are at Tourmanin, Bāqūzah, and Qalb-Lōzah. In these buildings round arches, hemispherical domes, and barrel vaults—all in stone—are found. Other features that came to be used later in Muslim mosques are pierced panels or *claires-voies* in stone, usually marble, and doors studded with bronze. The horse-shoe arch is also occasionally seen. In Armenia a large number of churches of similar type and origin are found, but as some recent critics date these much later than has previously been supposed, it is doubtful if they are old enough to have seriously affected the progress of Saracenic architecture. Mention should, however, be made of one more feature of sixth-century Syrian art. The beautiful mosaic pavements⁴ found in Palestine illustrate the flowing and naturalistic character of ornament of this period, and it may have been their close association with Christianity that led Muḥammad to exclude all natural forms from the art of his followers.

Lastly, there are many authorities who attribute to Hellenistic art in Syria and Asia Minor the prototype of the *mihrāb* or prayer-niche. The form that this feature assumed under the Arabs, a niche semicircular on plan, with flanking shafts supporting an arch above, was frequently used in these countries prior to Muslim times.

¹ De Vogüé, *op. cit.*, vol. i, p. 61, and plate xxi.

² *Ibid.*, p. 63 and plates xxii, xxiii.

³ *Ibid.*

⁴ M. S. Briggs, 'The Mosaic Pavement of Shellal near Gaza', in *Burlington Magazine* (1919).

The *Coptic Art* of Egypt is so called from the place of its origin, 'Copt' being no more than a form of the second syllable of the word 'Egyptian' in Greek. It is thus only another name for Egyptian-Christian art. Christianity, from its centre at Alexandria, had grown to considerable proportions by the middle of the second century A. D., and was chiefly remarkable for the large number of monks and anchorites who inhabited certain districts, especially the Thebaïd and the Wādī Naṭrūn. In very many cases their convents were of the plainest description, while the cells of the thousands of hermits were utterly without pretensions to be regarded as 'architecture'. But even among the bare monasteries, cemeteries, and churches that remain to us from these days one finds certain simple features of design and construction that may have influenced the Muslims. Externally the Coptic churches¹ are austere, devoid of porches or mouldings. They usually form part of a fortified *dayr* or convent, round which the humble dwellings of the Christians are crowded, so that it is impossible to distinguish the church as a separate building. The entrance is no more than a low door in some narrow alley, as unpretentious as the portal of the great basilica at Bethlehem. The church is enclosed by a rectangular wall, but is divided into a nave and aisles, over which there is a triforium but no clerestory. At the east end is a principal apse flanked on either side by smaller apses. Over each apse is a dome. These domes usually form the only external feature to mark the church from the flat roofs of the surrounding hovels. Internally the churches have few windows and those of small size, but the resulting darkness is restful to the eyes in the glaring sun of the desert, and thus by no means undesirable. The central sanctuary contains the patriarchal or episcopal throne, with seats for the priests round the apse. It is surrounded by a wooden screen, usually carved and inlaid. The next lateral division, or choir, is separated from the nave by a screen of lattice-work, and the nave itself is further divided by screens into two parts, the front being reserved for men and the back for women. In some cases, as in some modern Coptic churches, the women are accommodated in the triforium galleries. Sometimes a narthex is found at the west end. The construction is of the simplest, a wooden roof being generally used. The columns of the arcade are frequently of marble removed from older buildings. The screens are often of much later date than the rest of the church, and the building itself has seldom escaped alteration. A number of these churches still exist at Old Cairo, another group is in the Wādī Naṭrūn, and among isolated monasteries may be mentioned the Red and White Convents at Sohāj, St. Jeremiah at Saqqāra, and St. Simeon at Aswān. Some controversy has taken place as to the dates

¹ A. J. Butler, *Ancient Coptic Churches of Egypt* (Oxford, 1884).

of the construction of certain Coptic vaults and domes, where the 'niche pendentive'—one of the most important constructional elements in Muslim architecture—occurs. Rivoira and other authorities state that the dome of the Red Convent at Sohāj is much later than is usually believed. Apart from this feature, it does not appear that the Muslims can have borrowed much from Coptic construction, though the thought crossed my mind, when examining the fifth-century Christian necropolis at al-Bagawat¹ in the remote Khārigah Oasis, that possibly one saw here the prototype of the *Qarāfah* (the 'Tombs of the Caliphs') at Cairo. It is more certain that the Arabs did utilize the services of Coptic architects and craftsmen for their mosques in Egypt, and that to these men they owed many of their decorative *motifs*. This question is more fully discussed in Chapter X of the present volume, dealing with the nature and basis of ornamental forms. For the moment it is enough to say that Coptic decorative art was a debased provincial form of that prevailing in Constantinople.

The great basilican settlement of Abū-Menas, or Karm abū-Minā, some thirty miles west of Alexandria, can hardly be classified with the smaller Coptic churches.² It grew up round the burial-place of St. Menas (who died A. D. 296) as a place of pilgrimage, and the larger of its basilicas was erected by the Roman Emperor Arcadius about a century later. It was planned on the conventional lines of the Christian basilica, with nave, aisles, transept, narthex, and apse. Like the luxurious pagan and Christian buildings of Alexandria itself, it may have indirectly influenced early Muslim builders, but no direct effect can be traced.

M. Saladin considers that the Arabs borrowed ideas of massing, grouping, and monumental planning from the ancient temples that they found in Thebes and elsewhere in Upper Egypt, but there is no evidence that such aspects of their building ever troubled them. There is no greater gulf between any two types of architecture than that which separates the mosques of Cairo from the temples of the Upper Nile.

Sasanian or Sasanid architecture was practised in Mesopotamia and Persia under the line of kings from whom it takes its name. This dynasty lasted through four centuries (A. D. 226–641) and its mode of building was one of the most powerful factors in the formation of Arab art. Essentially brick-construction, Sasanian architecture was only an extension of the older traditions, Assyrian and Chaldaean, that had prevailed in the land for thousands of years before. It is to these primitive civilizations that M. Saladin attributes several important

¹ C. M. Kaufmann, *Ein altchristliches Pompeji in der libyschen Wüste* (Mainz, 1902).

² C. M. Kaufmann, *Die heilige Stadt der Wüste* (1918).

features in Muslim art, viz. the ovoidal or elliptical dome, minarets in the form of spiral towers (as used at Sāmarrā and in Ibn Ṭūlūn's mosque at Cairo), buttressed towers, indented battlements, enamelled wall-tiles, metal-covered roofs, and many principles of the science of fortification.

According to Dieulafoy, who has made exhaustive studies in this field, the palaces at Hatra and Fīrūzābād, previously regarded as Sasanian, must be assigned to a much earlier period. But Rivoira again disagrees with this view, so that it is preferable to instance only those Sasanian buildings that are admitted as such by all authorities. Among these are the palaces of Sarvistān, the Tāj-i-Kisrā at Ctesiphon, Qaṣr ash-Shīrīn between Baghdād and Kirmānshāh, and Ukhaidir, though the period of the last-named is uncertain. Rivoira and others throw doubts on the Sasanian character of the palace of Mshatta near the Gulf of 'Aqabah, and the balance of opinion now places the castle of 'Ammān (or Rabbath-Ammon)—with its celebrated horse-shoe arches—later than the Arab conquests. The four great palaces named above probably date from the reigns of Chosroes I (A. D. 531–79) and Chosroes II (A. D. 590–628) and have many features in common. They are planned on a gigantic scale, constructed of brick, and in part vaulted. Rivoira ascribes all the Sasanian knowledge of vaulting to Roman sources, whereas Dieulafoy maintains that the Romans learned vaulting from the Parthians in Mesopotamia ! The most remarkable achievement in this direction is the colossal ovoidal vault of the great hall at Ctesiphon.

There is no doubt that much of the Saracenic knowledge of vaulting was derived from Sasanian sources, but further consideration of this question must be deferred to a later chapter. The origin of the horse-shoe arch, which occurs, in a decorative form only, on the façade at Ctesiphon, is also a difficult matter to decide ; and the pierced panels or *claires-voies*, already mentioned in connexion with Syrian and Coptic architecture, are also found in Sasanian buildings. Cusped arches are found in Mesopotamia, but may have arrived there from India.

With the constant tides of invasion and civilization sweeping to and fro over these countries of the Near East, it becomes almost impossible to assess the rival claims to have invented the various features of Saracenic architecture. Without accepting Rivoira's theory that everything under the sun came in the first place from Rome, or Gayet's that the Copts of Alexandria were responsible for every important attribute of Muslim art, or Dieulafoy's that Lombard and Gothic architecture alike had their birth in the brick palaces of the Sasanian kings, one can still see the combined influence of Syria, Egypt, and Mesopotamia in the plans of the Cairo mosques and in the construction of Cairo domes.

The *Buddhist architecture of India* forms the fifth source of inspiration for the Saracenic architecture of Egypt and Syria. Many centuries before the Hijrah, even in the reign of Asoka (273–242 B.C.), the first great ruler of Hindustan, intercourse between Egypt and India was frequent and regular. Prior to the Muslim conquest of Sind in 712, Buddhist architecture had spread over the country. Its temples were built of stone and richly carved. In the third to first centuries B.C. the horse-shoe arch had been used in the caves and temples of Lomas Rishi, Bhaja, Karli, and Nasik, long before any archaeologist dare claim that it was known farther west. The curiously-shaped tapering towers, circular on plan, and the boldly-carved bracket capitals that form such striking features in early Indian buildings do not appear to have been utilized by the Muslims, but there is a strange type of capital—not unlike the Corinthian type in shape (if one can imagine it reversed and stripped of its acanthus leaves)—that may have been borrowed from this source. But most startling is the theory propounded by Havell, that in destroying Buddhist temples and smashing the images of the saint, the Arabs first thought of utilizing the empty niche in the Indian temple as the *mihhrāb* for their mosque, the niche that should indicate to the faithful the direction of Mecca :

‘The idea appealed strongly to the Arab race, for every mariner saw the mihrab in the bow of his ship and every desert nomad in the door of his tent.’¹

He proceeds to argue that the intense devotion attributed to the niche thus popularized its form, and that the niche-form—the arch-form in fact—became characteristic of Saracenic and later of Gothic architecture! Thus he writes that arch-forms—pointed, stilted, ogival, foliated, horse-shoe—all of which are found in India from a very early date, were transplanted to the western nations who made such good use of them in the Middle Ages. And finally, he holds that, though India had nothing to teach the Muslims in regard to dome-construction, she furnished them with that niche-form which is the embryo of the stalactite-decoration that they carried to such extraordinary lengths in later years.

BIBLIOGRAPHY FOR CHAPTER I, ETC.

Ia. *General introductory works on Islam and its foundation.*

Ameer Ali, Syed. *Islām* (in series *Religions Ancient and Modern*). London, 1914.

— *A Short History of the Saracens*. London, 1921.

Arnold, Sir T. W., and others. *Encyclopaedia of Islām (in progress)*. London, &c., 1908, &c.

Butler, Dr. A. J. *The Arab Conquest of Egypt*. Oxford, 1892.

Caetani, L. *Annali dell' Islām*. Milan, 1905, &c.

¹ E. B. Havell, *Indian Architecture* (London, 1913).

- Gibbon, E. *Decline and Fall of the Roman Empire*, vol. vi (in *The World's Classics*) London, 1903.
 Hughes, T. P. *Dictionary of Islam*. London, 1885.
 Margoliouth, D. S. *Mohammed and the Rise of Islam*. London, 1906.
 — *Mohammedanism* (in *Home University Library*). London, 1911.
 Muir, Sir W. *The Life of Mahomet*. London, 1878.
 Qur'ān, The. In series *Everyman's Library*. London, 1909.

Ib. Books and articles dealing in general with the subject of this volume suitable for general reference.

- Baedeker, K. (editor). *Egypt* (incl. article on 'Arab Art' by Franz). Leipzig, 1914.
 — *Palestine and Syria*. Leipzig, 1912.
 Berchem, M. van. 'Notes d'archéologie arabe' (in *Mém. Mission arch. franç. du Caire*). Cairo, 1888.
 — Article 'Architecture' (in *Encyc. of Islām*). London, &c., 1908.
 — *Matériaux pour un Corpus Inscr. Arabicarum*. Cairo, 1894-1903.
 — 'Voyage en Syrie' (in *Mém. de l'Inst. franç. archéologique*). Cairo, 1914-15.
 Besant and Palmer. *Jerusalem*. London, 1899.
 Borrmann, R. *Die Baukunst . . . des Islam im Mittelalter*. Leipzig, 1904.
 Bourgoin, J. *Les arts arabes*. Paris, 1873.
 — 'Précis de l'art arabe' (in *Mém. Mission arch. franç. du Caire*). Paris, 1889.
 Briggs, M. S. Roman Tradition in Moslem Architecture (in *Burlington Magazine*) London, 1920.
 — Saracenic Architecture in Egypt and Palestine (in *R.I.B.A. Journal*). London, 1921.
 Carpenter, R. H. The mosques and cathedrals of Cordova and Seville and some contemporary Arabic buildings (in *R.I.B.A. Transactions*). London, 1882-3.
 Comité de conservation des monuments de l'art arabe. Annual reports (*in progress*). Cairo, 1882, &c.
 Coste, P. X. *Architecture arabe*. Paris, 1893.
 Creswell, K. A. C. *Brief chronology of Muhammadan monuments of Egypt to A.D. 1517*. Cairo, 1919.
 Devonshire, Mrs. R. L. *Rambles in Cairo*. Cairo, 1917.
 — *Some Cairo Mosques and their Founders*. London, 1921.
 Diez, E. *Die Kunst der islamischen Völker*. Berlin, 1915.
 Dobrée, B. 'Arabic Art in Egypt' (in *Burlington Magazine*). London, 1920.
 Ebers, Georg. *Egypt* (trans. Clara Bell). London, 1898.
 — *Palästina in Bild und Wort*. Stuttgart.
 Fago, V. *Arte araba*. Rome, 1909.
 Fergusson, J. *Indian and Eastern Architecture*. London, 1910.
 Franz Pāshā, J. *Die Baukunst des Islam*. Darmstadt, 1896.
 — *Kairo* (in series *Berühmte Kunststätten*). Leipzig, 1903.
 Gayet, A. *L'Art arabe*. Paris, 1893.
 Herz Pasha, M. *Catalogue illustré du Musée arabe du Caire* [also in English, 1907]. Cairo, 1895.
 — Article on 'Arab Art' in Joanne's *Guidebook*. Paris, 1910.
 Jomard, M. *Description de l'Égypte* (see volume *État moderne*). Paris, 1809-28.
 Lane, E. W. *Manners and customs of the Modern Egyptians*. London, 1836.
 Lane-Poole, S. *Saracenic Art*. London, 1886.
 — *History of Egypt in the Middle Ages*. London, 1914.
 — 'Cairo' (in series *Mediaeval Towns*). London, 1906.
 Lebon, Dr. G. *La civilisation des Arabes*. Paris, 1883.
 Le Strange, G. *Palestine under the Moslems*. London, 1890.
 Maqrīzī. *Khīṭaṭ Maṣr*. Būlāq, 1853.
 Marcel, J. J. *Histoire de l'Égypte depuis la conquête des Arabes*. Paris, 1848.

- March-Phillipps, L. Chapter on 'The Arab in Architecture' (in *The Works of Man*). London, 1911.
- Margoliouth, D. S. *Cairo, Jerusalem, and Damascus*. London, 1907.
- Mehren, A. F. *Cahira og Kerifat*. Copenhagen, 1869.
- *Tableau général des monuments religieux du Caire*. St. Petersburg, 1871.
- Migeon, G. *Le Caire* (in series *Villes d'art célèbres*). Paris, 1905.
- Much, H. *Islamik*. Hamburg, 1921.
- Prangey, Girault de. *Monuments arabes d'Égypte, de Syrie, et d'Asie Mineure*. Paris, 1846-52.
- Prisse d'Avennes, E. *L'Art arabe d'après les monuments du Caire*. Paris, 1878.
- *La décoration arabe*. Paris, 1880.
- Rivoira, G. T. *Moslem Architecture*. Oxford, 1919.
- Saladin, H. Article on 'Muhammadan Architecture' (in *Hastings's Dictionary of Religion and Ethics*). Edinburgh, 1908, &c.
- Saladin et Migeon. *L'Art musulman* (2 vols.). Paris, 1907.
- Sauvaire, H. 'Description de Damas traduite de l'arabe de Abd al-Basit al-Almaoui' (in *Journal Asiatique*). Paris, 1895-6.
- Sobernheim, M. Article on 'Halab' (Aleppo, in *Encyclopaedia of Islām*). London, 1908, &c.
- 'Die Inschriften der Zitadelle von Damaskus' (in *Der Islām*). Berlin, 1921.
- Spiers, R. P. Article on 'Muhammadan Architecture' (in *Encyclopaedia Britannica*). Cambridge, 1911.
- Mahometan Architecture (in *Architecture East and West*). London, 1905.
- Stalactite Vaulting (in *Architecture East and West*). London, 1905.
- Strzygowski, J. Article on 'Muhammadan Art' (in *Hastings's Dictionary of Religion and Ethics*). Edinburgh, 1908, &c.
- Thiersch, H. *Pharos. Antike Islam und Occident*. Leipzig, 1909.
- Ware, Prof. W. M. Saracenic Architecture (in *Harvard Engineering Journal*). Harvard, 1905.
- Wiegand, T. (editor). *Alte Denkmäler aus Syrien, Palästina, und Westarabien*. Berlin, 1918.
- Wilkinson, Sir G. Saracenic Architecture (in *R. I. B. A. Transactions*). London, 1860-1.
- Ic. *Books dealing with architecture of the period preceding the year of the Hijrah (A. D. 622).*
- Bell, Miss G. L. *Amurath to Amurath*. London, 1911.
- *Palace and Mosque at Ukhaïdir*. Oxford, 1914.
- Berchem, M. van, and Strzygowski, J. *Amida*. Heidelberg, 1910.
- Clarke, S. *Christian Antiquities in the Nile Valley*. Oxford, 1912.
- Dalton, O. M. *Byzantine Art*. Oxford, 1911.
- *Early Christian Antiquities* (British Museum handbook). London, 1903.
- Diehl, C. *Manuel d'art byzantin*. Paris, 1910.
- Dieulafoy, M. *L'Art antique de la Perse*. Paris, 1884-5.
- Gailhabaud, J. *L'Architecture du V^e au XV^e siècle*. Paris, 1850-9.
- Gayet, A. *L'Art copte*. Paris, 1902.
- Harvey, W. (and others). *The Church of the Nativity at Bethlehem*. London, 1911.
- Havell, E. B. *Indian Architecture*. London, 1913.
- *A Handbook of Indian Art*. London, 1920.
- Herzfeld, E. *Mshattā, Hira, und Bādiya*. Berlin, 1921.
- Jackson, Sir T. G. *Byzantine and Romanesque Architecture*. Cambridge, 1920.
- Reuther, A. *Ocheïdir*. Leipzig, 1912.
- Spiers, R. P. Sassanian Art (in *Architecture East and West*). London, 1905.
- Strzygowski, J. *Orient oder Rom*. Leipzig, 1901.
- Vogüé, M. de. *Architecture du I^{er} au VII^e siècle dans la Syrie et le Haouran*. Paris, 1877.

II

THE FIRST MOSQUES (A. D. 622-868)

IN the year 620, according to the ancient historians, when Muḥammad had retired to the mountains near Mecca to meditate on the wickedness of the world, a woman burning incense before the sacred shrine of the Ka'bah accidentally set fire to the curtain across the entrance and thus the shrine itself—evidently a structure of wood—was destroyed. The Quraysh at once took measures to reconstruct the little building. In this they were helped by a fortunate coincidence, for a Greek ship, laden with material for rebuilding a church in Abyssinia, foundered on the Red Sea coast near Jiddah, and a Copt or Greek on board, who was a skilled carpenter and builder, Bāqūm by name, was induced to place himself and his cargo at the service of the Arabs. The citizens of Mecca vied with one another to assist in the work, presumably in the capacity of unskilled labourers. Among them Muḥammad is stated to have borne his part. The new structure included marble columns and a staircase. The old writers differ considerably in points of detail, some stating that the timber of the ship itself was utilized in the construction, others remarking that the Copt 'knew the art of sawing wood and planing it', implying that the Quraysh did not. Whatever may be the historical value of this story, its moral for us is that two years before the need for designing his first mosque arose, Muḥammad was assisting in some minor capacity at the rebuilding of the Ka'bah, under the supervision of a Copt or Greek who understood far more of the technical work involved than did the Arabs of Mecca.

When the Prophet entered Medina in 622, the year of the Hijrah, he founded the first mosque of Islam. He alighted from his camel in a grove of date-palms outside the city, and there he had a space cleared, about a hundred cubits square. Round this space was built a wall, less than seven cubits high, its lower part or foundations of stone, the upper part of sun-dried clay bricks. This simple enclosure or yard was purchased from its owner, had a well adjoining, and differed in no way from the peasant's farmstead found on every green patch of ground in the Near East. From the courtyard opened a series of rooms for Muḥammad's various wives, a fresh room being added for each widow that he admitted to his *ḥarīm*. These rooms also resembled the rude hovels of the modern Egyptian village, for they were not more than 12 feet square and 7 feet high, with walls of sun-baked bricks and a roof of



FIG. 1. THE PRINCIPAL LĪWĀN OR SANCTUARY OF A MOSQUE
Cairo: Mosque of 'Amr ibn al-'As

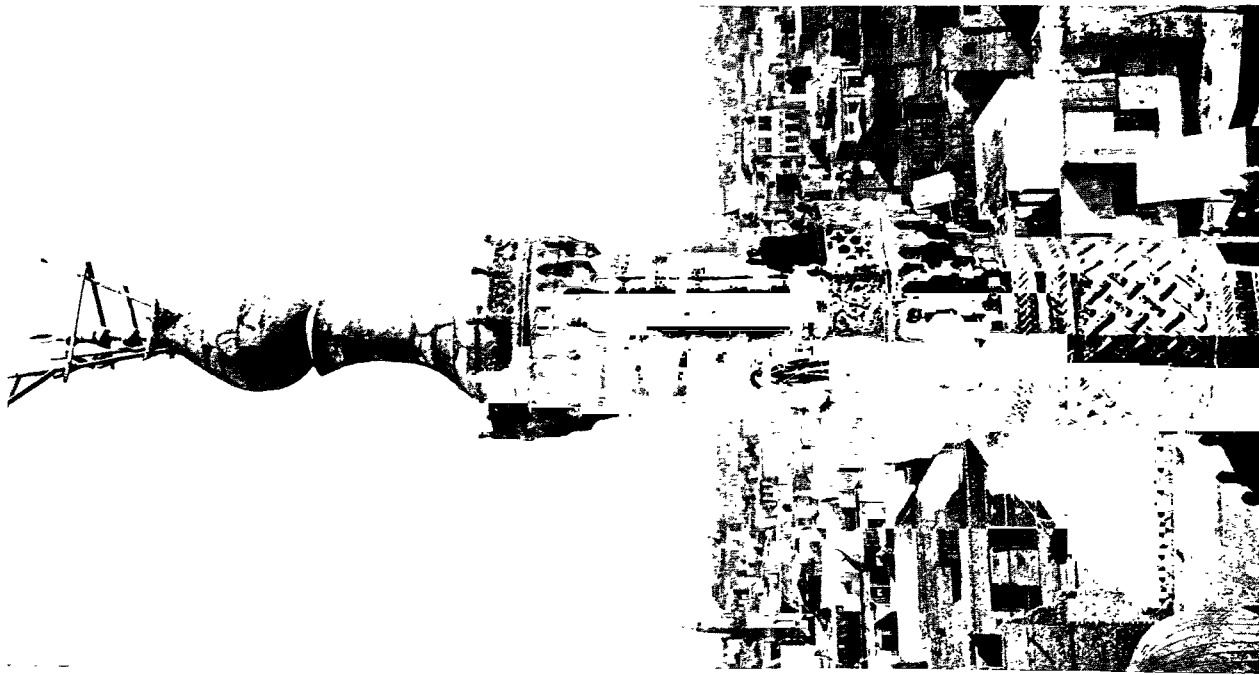


FIG. 2. A TYPICAL MINARET
Cairo : Mosque of al-Azhar

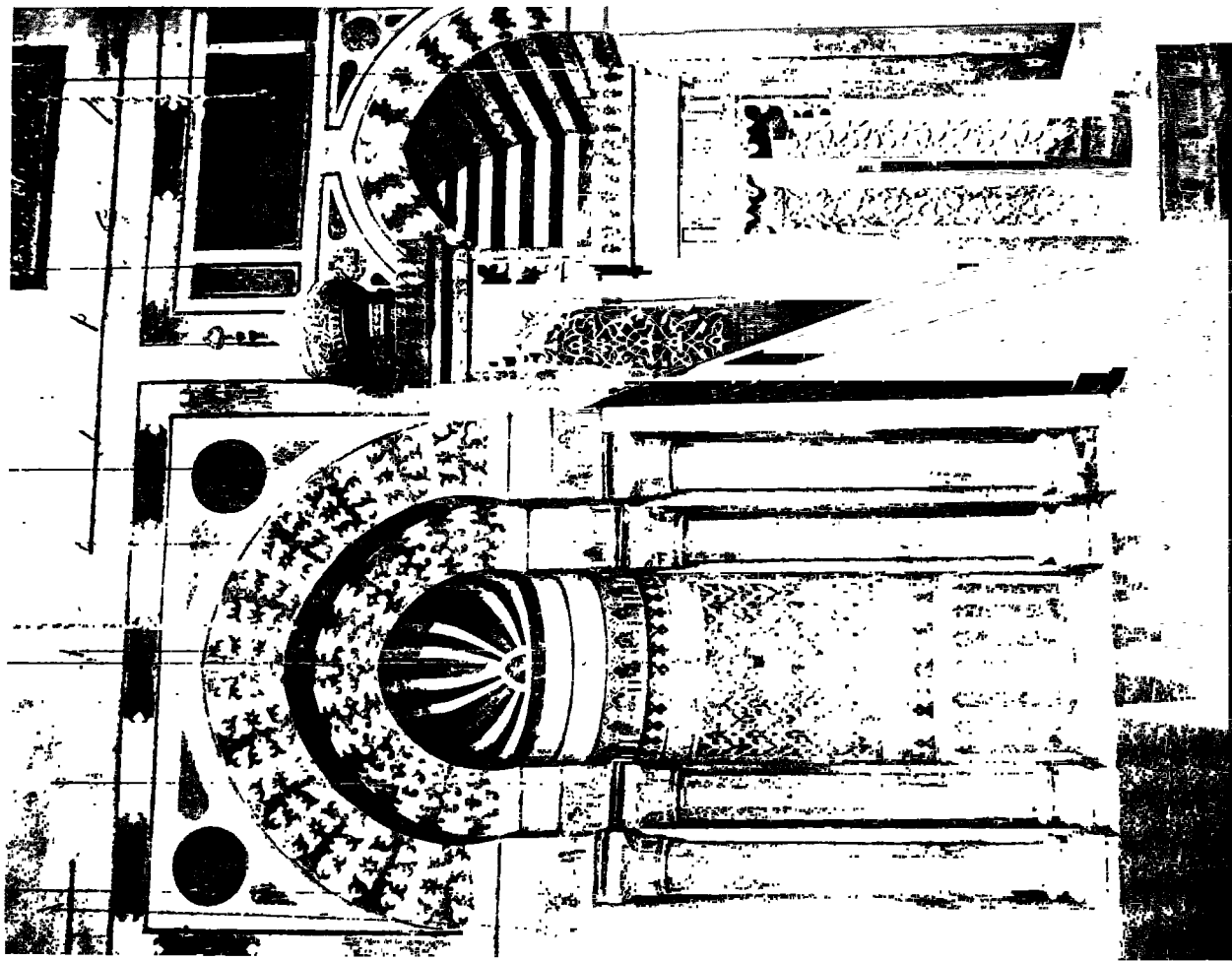


FIG. 3. A TYPICAL MIHRAB (NICHE) AND MINBAR (PULPIT)
Cairo : Madrasah of Barqūq *intra muros*

palm-trunks filled in with mud. An additional room was used by the prophet for his devotions. Of furniture as we understand it, there was none.

Before long, the companions of Muḥammad begged for some protection from the rays of the sun. A rough shelter of palm-trunks was then erected and covered with palm-branches and mud, still the primitive method of constructing a roof in the East. This shelter was the origin of the *līwān*, or covered sanctuary, and eventually the *ṣaḥn*, or courtyard, was surrounded by four *līwānāt*, of which the deepest faced the direction of Mecca.

When Muḥammad first established himself at Medina, he laid down no rule as to the point towards which his followers should incline themselves as they worshipped. The Jews followed the example of Daniel and, when they prayed, opened their windows in the direction of the city of David. For some reason Muḥammad advised that the same practice should be adopted by the faithful, but it soon occurred to him that, instead of Jerusalem, Islam should establish its own distinctive *qiblah* (= place towards which to look in prayer). In such moments of perplexity, as in his complicated marital affairs, he was accustomed to seek and receive guidance in the form of a revelation from the archangel Gabriel, who never failed him. This is recorded in the second *Sūrah* of the Qur'ān :

‘ We have made you a middle nation to be a witness against men . . . We appointed the *qiblah* to which thou didst turn, only that we might know him that followeth the apostle, from him who turneth upon his heels . . . We have seen thee often turn thy face about towards heaven with doubt ; but we will surely give thee a *qiblah* that thou shalt like. . . . Turn, therefore, thy face toward the sacred temple ; wherever ye be turn your faces towards it. . . . From whatever place soever thou comest forth, turn thy face toward the holy *ka'bah* ; for this is in truth from Allah ; neither is he regardless of what ye do . . . Every sect hath a certain quarter to which they turn themselves, but do ye strive to run after good things.’

With sound dramatic instinct, Muḥammad recited these words at a public service, as he and all his followers faced towards Jerusalem, and then abruptly turned in the direction of Mecca, which ever since has been the cynosure of devout Muslims from China to Morocco. Already the prototype of the mediaeval mosque was created, the square court for the assembly for worshippers, partly protected against the rays of the sun, with the invisible *qiblah* marking the direction of Mecca.

Two more developments soon took place. In order to address his

disciples with more effect, Muḥammad found it necessary to introduce a low pulpit of tamarisk-wood to raise him three steps or so above the general level. This may or may not have been the embryo of the richly carved and canopied *mimbar* (a throne or pulpit) found in mosques of later date, the earliest remaining example being at Qayrawān,

whither it was brought from Baghdād by Ibn al-Aghlab in A. H. 242 (A. D. 856-7). It is quite possible, however, that the mihrāb found its prototype in the Christian *ambo*.

Regularity of observance of the hours of prayer being an essential part of the Muslim faith, Muḥammad had to devise some means of summoning all believers to their devotions—(not necessarily to the mosque)—five times a day. He wished to avoid the bells that were characteristic of Christianity, and finally adopted a suggestion made by a man who had dreamed of a better way. He commanded a faithful follower, Bilāl, who was possessed of powerful lungs, to chant a summons to prayer from the highest point of the mosque or some adjoining building. Bilāl was the forerunner of the modern *mu'adhdhin*, whose monotonous song from a lofty minaret at first strikes a foreigner as the most weird sound of an Eastern city, and finally impresses him with its strange fascination. The high point from which he called in primitive

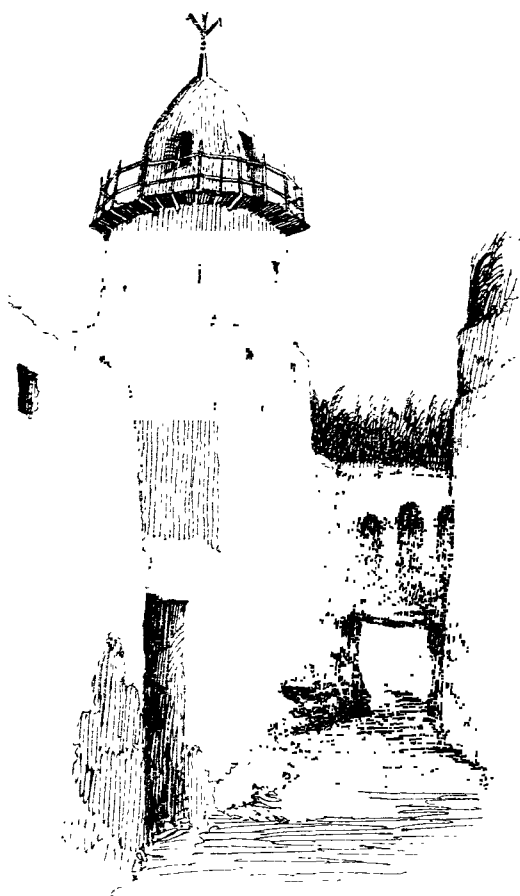


FIG. 4.
KHĀRIGAH OASIS (IN THE LIBYAN DESERT).
A VILLAGE MINARET. M.S.B. del.

days soon made it necessary to provide the *minaret* or tower which in later years came to be the most graceful and striking feature of the mediaeval mosque. These lofty minarets of later centuries, indeed, provided the *mu'adhdhin* with so advantageous a prospect of the jealously-guarded interior of the Muslim household and its fair inmates that it became usual to restrict the office to blind men, of whom the ophthalmia-ridden countries of the Near East always had a plentiful supply. Lastly, Muḥammad's strict injunctions as to ablution in connexion with worship soon made it necessary to provide facilities for this purpose. But

within the Prophet's lifetime no thought of architectural fitness had entered into his conception of the mosque. It was barely even a building, a structure of the utmost austerity, devoid of any rich or even permanent material as of any ornament or decoration. He probably disapproved of the splendour of Christian churches just as the Early Christians in their day had condemned the temples of the pagan Greeks and Romans. Yet in each case the new religion swallowed all the external pomp of the old before many centuries had passed, and it is only in his rigid restrictions on the use of human and natural forms in art that Muḥammad's own love of simplicity has been respected.

In Edward Lane's admirable study¹ of life in Cairo rather less than a century ago, he gives a description of Muslim worship, both personal and public, that enables one to understand the ritual observed in a modern Muhammadan mosque. He is therefore quoted here at some length, before reference is made to the enlargement of the mosque at Medina and to the foundation of other mosques at Mecca, Kūfah, Jerusalem, Cairo, Qayrawān, and Damascus, during the remainder of the seventh century. He first describes the ordinary process of ablution prior to prayers, either in the worshipper's own home or shop or in the mosque, and then the washing of the whole body performed as a religious act on the morning of Friday. Then after mention of the use of a mat or prayer-carpet, he writes of the five regular prayers that the pious Muslim 'makes' at stated hours from sunset to sunrise:

'The prayers which are performed daily at the five periods before mentioned are said to be of so many *rek'ahs*, or inclinations of the head. The worshipper, standing with his face towards the Kibleh (that is, towards Mekkeh), and his feet not quite close

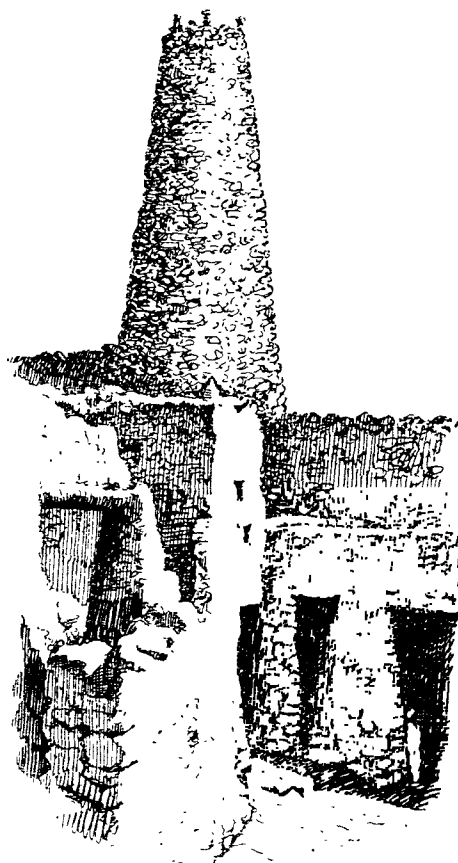


FIG. 5.
AGHURMI (FORTIFIED VILLAGE IN
OASIS OF SĪWAH). A MINARET.
M.S.B. del.

¹ Edward W. Lane, *The Manners and Customs of the Modern Egyptians* (London, 1836). No attempt has been made in quoting

this long extract to bring Lane's system of transliteration into line with that adopted in this book. (See Preface.)

together, says, inaudibly, that he has purposed to recite the prayers of so many *rek'ahs* . . . the morning-prayers of the present day ; and then raising his open hands on each side of his face, and touching the lobes of his ears with the ends of his thumbs, he says, " God is most Great " (" *Allāhu Akbar* "). This ejaculation is called the *tekbeer*. He then proceeds to recite the prayers of the prescribed number of *rek'ahs*, thus : ' . . .

Here follows a detailed account of the prayers with the appropriate postures and genuflexions for each. The various prayers are followed by salutations, and then by any private petition the worshipper may choose to offer :

. . . ' while he does so looking at the palms of his two hands, which he holds like an open book before him, and then draws over his face from the forehead downwards.' . . . ' It is considered extremely sinful to interrupt a man when engaged in his devotions. The time usually occupied in repeating the prayers of four *rek'ahs* . . . is less than four, or even three minutes. The Muslim says the five daily prayers in his house or shop or in the mosque, according as may be most convenient to him : it is seldom that a person goes from his house to the mosque to pray, except to join the congregation on Friday. Men of the lower orders oftener pray in the mosques than those who have a comfortable home, and a mat or carpet upon which to pray.

' The same prayers are said by the congregation in the mosque on the noon of Friday ; but there are additional rites performed by the Imām and other ministers on this occasion. . . . The Muslim does not abstain from worldly business on Friday, except during the time of prayer.' . . . ' To form a proper conception of the ceremonials of the Friday-prayers, it is necessary to have some idea of the interior of a mosque.' . . . ' Most commonly a large mosque consists of porticoes surrounding a square open court, in the centre of which is a tank or a fountain for ablution. One side of the building faces the direction of Mekkeh and the portico on this side, being the principal place of prayer, is more spacious than those on the other three sides of the court : it generally has two or more rows of columns, forming so many aisles, parallel with the exterior wall. In some cases, this portico, like the other three, is open to the court ; in other cases, it is separated from the court by partitions of wood, connecting the front row of columns. In the centre of its exterior wall is the " *mehráb* " (or niche) which marks the direction of Mekkeh ; and to the right of this is the " *mimbar* " (or pulpit). Opposite the *mehráb*, in the fore part of

the portico, or in its central part, there is generally a platform (called "dikkeh"), surrounded by a parapet, and supported by small columns ; and by it, or before it, are one or two seats, having a kind of desk to bear a volume of the *Kur-án*, from which a chapter is read to the congregation. The walls are generally quite plain, being simply whitewashed ; but in some mosques the lower part of the wall of the place of prayer is lined with coloured marbles, and the other part ornamented with various devices executed in stucco, but mostly with texts of the *Kur-án* (which form long friezes, having a pleasing effect), and never with the representation of anything that has life. The pavement is covered with matting, and the rich and poor pray side by side ; the man of rank or wealth enjoying no peculiar distinction or comfort, unless (which is sometimes the case) he have a prayer-carpet brought by his servant, and spread for him.

'The Prophet did not forbid *women* to attend public prayers in a mosque, but pronounced it better for them to pray in private : in Cairo, however, neither females nor young boys are allowed to pray with the congregation in the mosque, or even to be present in the mosque at any time of prayer : formerly women were permitted (and perhaps are still in some countries), but were obliged to place themselves apart from the men, and behind the latter ; because, as Sale has remarked, the Muslims are of opinion that the presence of females inspires a different kind of devotion from that which is requisite in a place dedicated to the worship of God. . . .

'Over each of the mosques of Cairo presides a "Názir" (or warden), who is the trustee of the funds which arise from lands, houses, etc., bequeathed to the mosque by the founder and others, and who appoints the religious ministers and the inferior servants. Two "Imáms" are employed to officiate in each of the larger mosques : one of them, called the "Khateeb", preaches and prays before the congregation on Friday : the other is an "Imám Rátib", or ordinary Imám, who recites the five prayers of every day in the mosque, at the head of those persons who may be there at the exact times of those prayers : but in most of the smaller mosques both these offices are performed by one Imám. There are also to each mosque one or more "muëddins" (to chant the call to prayer), and "bowwábs" (or door-keepers), according as there are one or more *mád'nehs* (or menarets) and entrances ; and several other servants are employed to sweep the mosque, spread the mats, light the lamps, and attend to the *sákiyeh* (or water-wheel), by which the tank or fountain, and other receptacles for water, necessary to the performance of ablutions,

are supplied. The Imáms, and those persons who perform the lower offices, are all paid from the funds of the mosque, and not by any contributions exacted from the people. . . .

‘The large mosques are open from day-break till a little after the ’eshè, or till nearly two hours after sunset. The others are closed between the hours of morning and of noon prayers ; and most mosques are also closed in rainy weather (except at the times of prayer), lest persons who have no shoes should enter, and dirt the pavement and matting. Such persons always enter by the door nearest the tank or fountain (if there be more than one door), that they may wash before they pass into the place of prayer ; and generally this door alone is left open in dirty weather. The great mosque El-Azhar remains open all night, with the exception of the principal place of prayer, which is called the “ makşoorah ”, being partitioned off from the rest of the building. In many of the larger mosques, particularly in the afternoon, persons are seen lounging, chatting together, eating, sleeping, and sometimes spinning or sewing, or engaged in some other simple craft ; but, notwithstanding such practices, which are contrary to precepts of their prophet, the Muslims very highly respect their mosques. . . .

‘On the Friday, half an hour before the “ duhr ” (or noon), the muëddins of the mosques ascend to the galleries of the mád’nehs and chant the “ Selám ”, which is a salutation to the prophet. . . . Persons then begin to assemble in the mosques.

‘The utmost solemnity and decorum are observed in the public worship of the Muslims. Their looks and behaviour in the mosque are not those of enthusiastic devotion, but of calm and modest piety. Never are they guilty of a designedly irregular word or action during their prayers. The pride and fanaticism which they exhibit in common life, in intercourse with persons of their own or of a different faith, seem to be dropped on their entering the mosque, and they appear wholly absorbed in the adoration of their Creator ; humble and downcast, yet without affected humility or a forced expression of countenance.

‘The Muslim takes off his shoes at the door of the mosque, carries them in his left hand, sole to sole, and puts his right foot first over the threshold. If he have not previously performed the preparatory ablution, he repairs at once to the tank or fountain to acquit himself of that duty. Before he commences his prayers, he places his shoes (and his sword and pistols, if he have such arms,) upon the matting, a little before the spot where his head will touch the ground in prostration : his shoes are put one upon the other, sole to sole.

'The people who assemble to perform the noon-prayers of Friday arrange themselves in rows parallel to that side of the mosque in which is the niche, and facing that side. Many do not go until the adán of noon or just before. When a person goes at, or a little after, the Selám, as soon as he has taken his place in one of the ranks, he performs two rek'ahs, and then remains sitting, on his knees or cross-legged, while a reader, having seated himself on the reading-chair immediately after the Selám, is occupied in reciting . . . the 18th chapter of the Ḳur-án. . . . All the congregation, as soon as they hear the adán (which is the same as on other days), sit on their knees and feet. When the adán is finished, they stand up, and perform, each separately, two rek'ahs. . . .

'A servant of the mosque, called a "Muraḳkee", then opens the folding-doors at the foot of the pulpit-stairs, takes from behind them a straight, wooden sword, and, standing a little to the right of the doorway, with his right side towards the ḳibleh, holds this sword in his right hand, resting the point on the ground.'

He then writes various sayings and prayers, to which one or more 'Muballighs', stationed on the dikkah, chant sonorous responses. Meanwhile the Khateeb or Imám approaches the pulpit, takes the wooden sword from the Muraḳkee's hand:

. . . 'ascends the pulpit, and sits on the top step or platform. The pulpit of a large mosque, on this day, is decorated with two flags with the profession of the faith, or the names of God and Moḥammad, worked upon them: these are fixed at the top of the stairs, slanting forward.'

After a form of prayer of invocation from the Muraḳkee, the Khateeb rises, and holding the wooden sword as the Muraḳkee did before him, delivers a sermon. Lane gives a translation in full of one of these short Friday exhortations, delivered in Arabic in rhyming prose.

'The Khateeb, having concluded his exhortation, says to the congregation, "Supplicate God". He then sits down and prays privately; and each member of the congregation at the same time offers up some private petition, as after the ordinary prayers, holding his hands before him (looking at the palms) and then drawing them down his face. This done, the Muballighs say, "Ámeen. Ámeen! (Amen. Amen.) O Lord of the beings of the whole world".'

The Khateeb now rises again, and recites a long prayer of general intercession, given in full in Lane's book.

'The Khateeb or Imám, having ended it, descends from the

pulpit, and the Muballighs chant the *ikâme*h : the Imâm, stationed before the niche then recites . . . two *rek'ahs*. . . . The people do the same, but silently, and keeping time exactly with the Imâm in the various postures. Those who are of the Málíkee sect then leave the mosque ; and so also do many persons of the other sects : but some of the Sháfe'ees and Ḥanafees remain, and recite the *ordinary* *fard* prayers of noon ; forming a number of separate groups, in each of which one acts as Imâm. The rich, on going out of the mosque, often give alms to the poor outside the door.'

This long description has been quoted to give some idea of the appearance of a typical large mosque in Cairo to-day, of its Friday prayers, and of the ritual that has in large measure dictated its plan. Only a few years after Muḥammad's death the primitive mosque that he had founded at Medina gave place to much more architectural and ambitious structures in that town and in the greater cities as they fell before the Muslim armies. Yet a clear distinction must be drawn between the primitive mosques, as they appeared in the early centuries of Islam, and the later form that they assumed after successive rebuildings and restorations. This distinction has been ignored by most writers on Arab architecture, who illustrate, as primitive mosques, many examples that have long ceased to contain any considerable fragment of their first founder's work. It will therefore be my aim in this chapter to exclude all description in detail of later additions, and to attempt to describe each of these early shrines of Islam as it appeared in the seventh and eighth centuries, thus preserving the difference—ignored in this particular case by writers even of the standing of Saladin and Rivoira—between an architectural manual and a topographical guide-book.

Returning to the first mosque at Medina, we find that Muḥammad left there a structure of such bold simplicity, that, as Gayet observes, though it may contain the embryo of a plan, it does not embody the constituent elements of a building, and forms a very slender foundation on which to rear the great achievements of Arab architecture in the Middle Ages. It comprised an open court, a rudely-fashioned shelter or portico, and a low wooden platform for the use of the Prophet during religious observances and judicial ceremonies. In ancient Arabia the *mimbar* had been the judge's chair, and as the leader of Islam gradually became a great temporal ruler, his simple rostrum, while retaining its Arabic name, developed into an ornate pulpit or throne, generally the most gorgeous feature of the mediaeval mosque. As already stated, the direction of the *qiblah* was not yet indicated by the *mīhrāb* niche, afterwards destined to become the centre-piece of the whole mosque. This simple plan, such as it is, is thought by M. Saladin to have been

derived from older Semitic and Phoenician sanctuaries; while van Berchem suggests (in his article 'Architecture' in the *Encyclopaedia of Islām*) that a Christian church was the prototype, with its atrium with a central fountain as the *ṣahn*, its apse as the *mihrāb*, the church proper for *ḥiwān* or sanctuary, and its campanile for minaret.

After Muḥammad's death the building acquired additional importance from his tomb, and in 638 was entirely rebuilt on a large scale by the Caliph Omar. Yet even this new structure was far from constituting architecture as we understand it. Sun-baked bricks, the material used in the East from the times of Pharaoh to our own, were employed for the walls, and perhaps for piers supporting the roofs of the shelters. The latter were formed of palm-trunks covered with mud. The floor of the enclosure was cobbled, and there were six entrances. In 664-5 a *maqṣūrah*, or sanctuary, enclosed by a low wall, was added. This feature, again, is attributed by some to the very similar enclosure found in early Christian churches. In 709-10 the mosque was again reconstructed by the Caliph Walid I, with the assistance of workmen borrowed from the Byzantine Emperor. In this period a *mihrāb* niche was used, as well as four minarets, one at each corner. Further alterations were made at the end of the eighth century, and in the Middle Ages two serious fires led to such a complete rebuilding in each case that no part of the successive primitive structures can be said to exist. We possess reliable records of its appearance at various epochs in the writings of early pilgrims, as well as in pictures in illuminated manuscripts¹ and on glazed tiles. Very different was the original mosque at Mecca, which had as its centre the sacred stone built into the walls of the Ka'bah, for centuries the place of sacrifice for an ancient cult. Such extraordinary veneration was attached to this spot that it was actually believed that directly overhead, in heaven, existed a still older Ka'bah, round which the angels passed seven times in their adoration, as do the modern pilgrims at Mecca in their *ṭawāf*. The present Ka'bah was erected by Adam and guarded by angels. The famous black stone was given by the Archangel Gabriel to Abraham and was then white, but the sins of men turned it black. Other legends continued its miraculous story to later times. It has already been mentioned that in his early days Muḥammad was connected by his ancestry with the guardianship of the Ka'bah, and that he entered Mecca as a conqueror in A.D. 630. He died shortly afterwards, and nothing is recorded of any building he may have carried out there. Indeed his hands were too full for such work at the time, and it is only said that he destroyed a large number of idols that he found in the sacred enclosure. But one of his successors, Omar, planned a more

¹ Some of these are reproduced by Gayet and Rivoira, *q.v.*

generous space all round the Ka'bah, previously surrounded at no great distance by the houses of the priestly family, the Quraysh, to which Muḥammad had belonged. This *haram* (sacred area) he enclosed by a wall rather less than the height of a man, with gates in it corresponding to the passages between the houses he pulled down to give greater space. Later caliphs carried out further improvements, and Walid I, at the beginning of the eighth century, pulled down the *enceinte* and rebuilt it as a marble colonnade. It was again altered during the second half of this century, and then appears to have been untouched for several hundred years. If this was so, the account written by the pilgrim Ibn Jubayr in 1184 may be taken as an authentic record of its condition at the close of the eighth century, except perhaps in matters of ornamental detail. The Ka'bah itself was some 50 ft. high, 40 ft. long, and 33 ft. broad. The walls were about 3 ft. 6 in. thick and of dressed stone. The walls within were lined with marble in their lower part and above with plates of silver gilt. The floor was paved with marble. The ceiling was supported by three pillars of Indian wood. The walls externally were draped with veils of richly coloured silk, and five stained-glass windows lighted the interior. The roof was flat, and approached by a flight of steps, while another flight led up to the principal door. The great Ḥaram measured about 400 cubits by 300 cubits, and was enclosed by a three-aisled cloister with marble columns. There were nineteen entrances to this court. At each corner stood a minaret, and there were three other minarets in addition, each slightly different in design. Within the Ḥaram was enclosed the sacred well of Zamzam, sacred long before Muḥammad's time, and by him turned to good account, like the Ka'bah itself, as an object of pilgrimage, so that even now tens of thousands of pilgrims annually drink of the holy waters.

From the fourteenth to the seventeenth centuries the mosque of Mecca was enlarged, altered, and embellished out of all recognition. Rivoira says, quoting Caetani, that its plan was never repeated, 'out of regard for its sanctity'. What is meant by this statement is not very clear, for the plan¹ to-day consists only of a great *Ḥaram* surrounded by colonnades, such as is typical of the great congregational mosques of the next era in Cairo, and only differs from them in having various small buildings dotted about the enclosed area, as in the Ḥaram ash-Sharīf at Jerusalem. The distinctive feature of this mosque would appear to be that it was planned round an existing place of veneration, just as the Dome of the Rock at Jerusalem marks a spot regarded as especially holy. But to an architect its significance must be small, for, so far as the limited opportunities of illustrating and describing its

¹ Illustrated in Saladin, *L'Art musulman*, vol. i, p. 63.

present state enable us to form any judgement, very little of the original arrangement or structure remains.

In 639 a mosque was founded at Kūfah, three miles from Hīrah, the new Muslim capital of 'Irāq in Mesopotamia. It was square on plan, but surrounded merely by a ditch instead of by walls or colonnades, and included a 'gallery', whatever that may imply, carried on marble columns taken from the ruined palaces of the Persian kings hard by. Within a few years this mosque was rebuilt on a larger and more ambitious scale by native Persian workmen, who had previously been employed by the Sasanian kings. In this case a lofty colonnade was introduced, and the pillars were formed of stone drums jointed with lead. Rivoira is of opinion that this was the building described by Ibn Jubayr in 1184. He states that on the side towards the sanctuary there were five aisles, and on the three remaining sides of the court two aisles, the colonnades being constructed of stone as above. If we accept this view, we see here the first example of a mosque consisting of a court wholly surrounded by colonnades, though in other respects it is a natural development of the primitive enclosure at Medina. Unfortunately it has long disappeared, and is only known to us now in the accounts of early travellers.

Turning from Mesopotamia to Jerusalem, we find ourselves on more familiar but not less controversial ground. At the time of the Muslim conquest of the city in 639, Jerusalem contained a number of Christian churches of various dates, the oldest being probably that of 'Holy Sion'. In the fourth century Constantine erected a great rotunda over the Holy Sepulchre, a basilica adjoining, and the famous basilican church of the Nativity at Bethlehem. The empress Eudocia built the church of St. Stephen in the fifth century, the church of St. Anna appears to have been founded by this date, and in the middle of the sixth century more important buildings were carried out by Justinian, whose architectural masterpiece is the great church of Hagia Sophia in his capital city of Constantinople. To this period are now generally attributed the 'Golden Gate' in the Hāram ash-Sharīf or 'Temple Area', and some columns in the Mosque of al-Aqṣā, believed to have been removed there from his church of St. Mary the Virgin that formerly occupied nearly the same site. He is also said to have built the church of St. Sophia, and two hospitals. He extended the size of the Temple Area, but, as being the site of the Jewish Temple, this was still left desolate. Such was the architectural condition of the churches in Justinian's day, and we may assume that Jerusalem was then a well-built and even noble city, still retaining its dignity as a Roman provincial centre, and chiefly occupied in theological quarrels and the profitable manufacture of relics. In 614, twenty-five years before the Muslim

conquest, Chosroes, the Persian king, besieged and captured the city. His victory was followed by a wholesale massacre of monks and nuns, and by a systematic destruction of churches. Eight years later the Persians were driven out, and under Modestus the churches were rebuilt, probably in an inferior style, with the aid of a thousand workmen from Egypt. Before this work was completed the Arabs had captured Jerusalem.

Before describing their first buildings in the city, it is necessary to enlarge still further on the condition of affairs there, for the significance of Jerusalem is unique, and in order to understand properly the very difficult questions raised in regard to the Dome of the Rock and the mosque of al-Aqṣà one must take count of many historical factors.

Islam was in those days by no means intolerant of Christianity or of the ancient Jewish faith. Indeed Muḥammad had partly constructed his new religion from what he believed to be best in these two beliefs. And when the caliph Omar made his victorious entry into Jerusalem, clad in the simple garb of a Bedouin, and mounted on a camel, he met the Christian patriarch and issued a proclamation in which he promised, among other things, toleration and security for the Christians, subject to certain conditions, and provided that they erected no new churches or conventual buildings. Then Omar asked the patriarch to lead him to 'the place of adoration' of David. The story of this ceremony is related in detail by Sir Walter Besant,¹ and contains much of interest. Eventually they reached the deserted 'Temple Area', and under a heap of dung they found the *Ṣakhrāh*, the 'Holy Rock', from which the *Qubbat aṣ-Ṣakhrāh* or Dome of the Rock takes its name, and the traditional altar of burnt-offering in the ancient Jewish temple. Near this spot, in the great open space left desolate by the Christians because of its Jewish associations, Omar built his mosque. It was seen later by a Gaulish pilgrim, Arculph or Arculphus, whose description has been translated from the Latin as follows :

'Also in that famous place where, before, the temple had been magnificently built, the Saracens frequent a square house of prayer placed near the east wall, building it themselves—a poor work with upright beams and great planks—on certain remains of ruins ; which house is said to hold as many as three thousand men together.'²

This then was the real 'Mosque of Omar', a primitive structure of timber that has long ceased to exist, though the name has been misapplied to the great Dome of the Rock adjoining.

¹ Walter Besant and E. H. Palmer, *Jerusalem* (London, 1899), pp. 81-3.

² Col. C. R. Conder, *The City of Jerusalem* (London, 1909), p. 237.

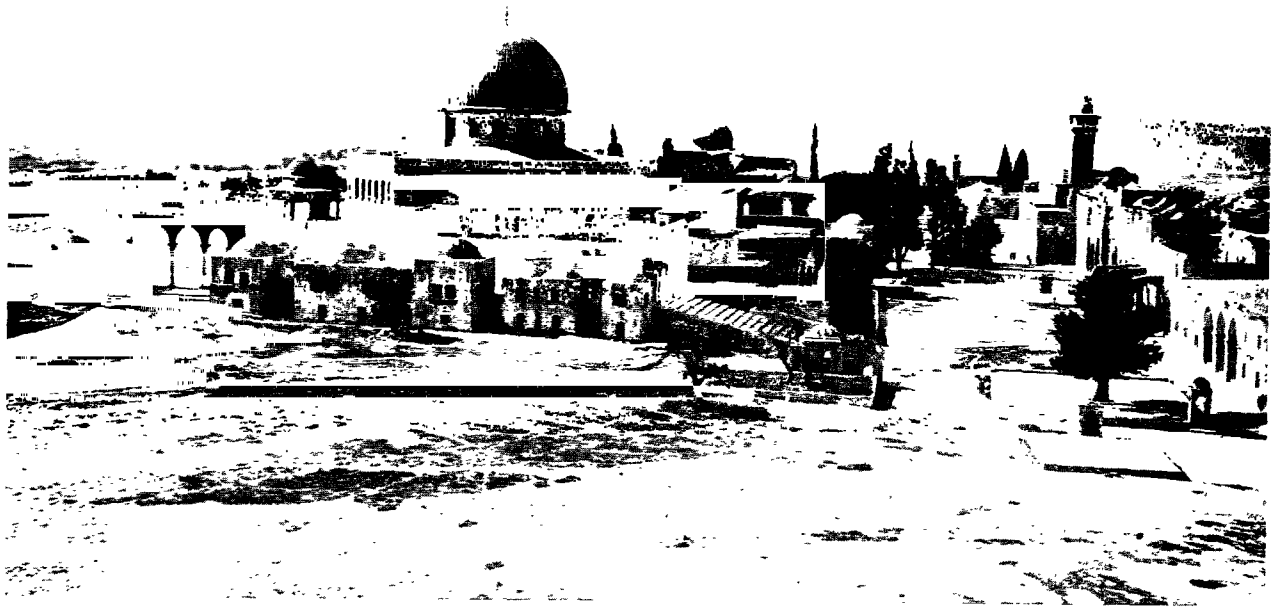


Photo: American Colony Stores, Jerusalem

FIG. 6. JERUSALEM: THE HARAM ASH-SHARĪF AND THE 'DOME OF THE ROCK'

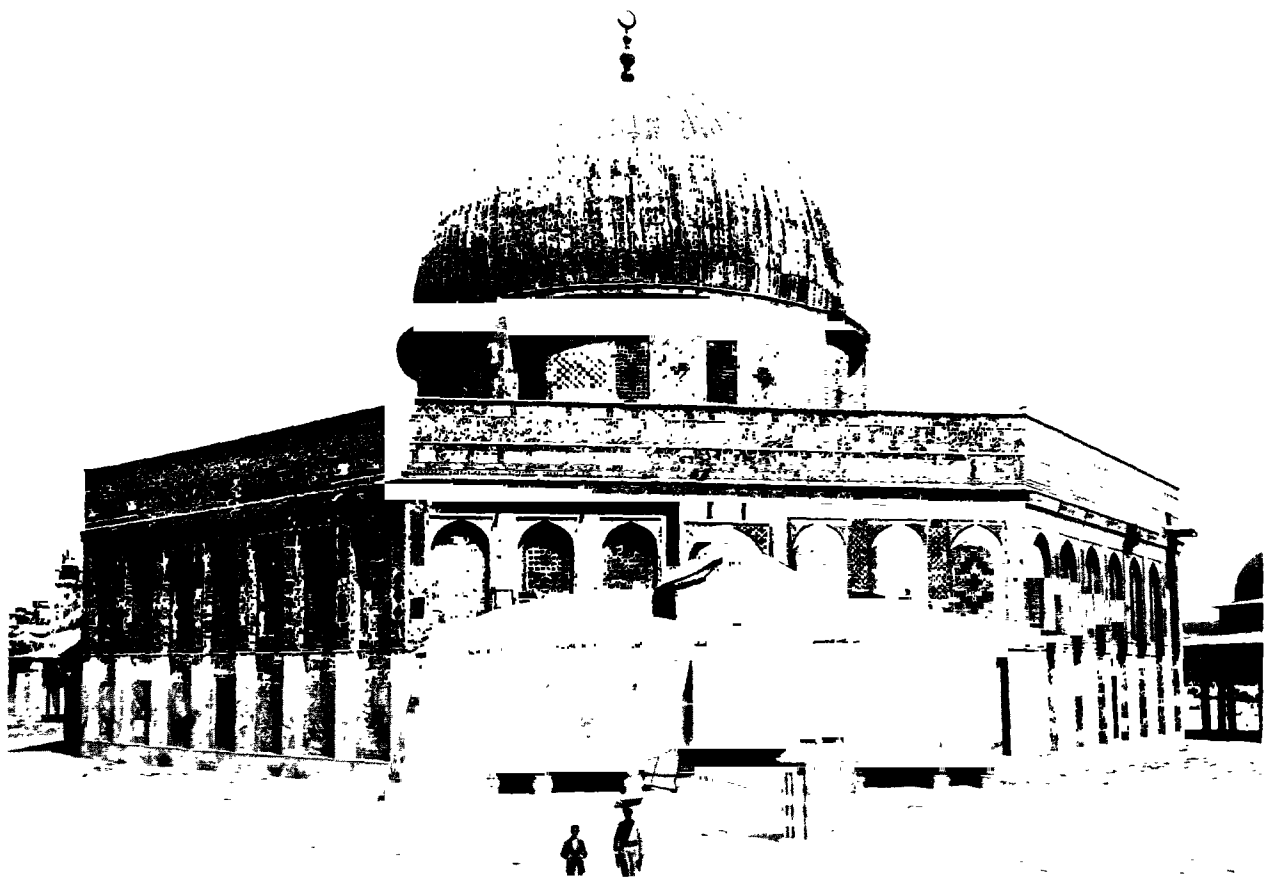


Photo: American Colony Stores, Jerusalem

FIG. 7. JERUSALEM: EXTERIOR OF THE QUBBAT AS-SAKHRAH 'DOME OF THE ROCK'

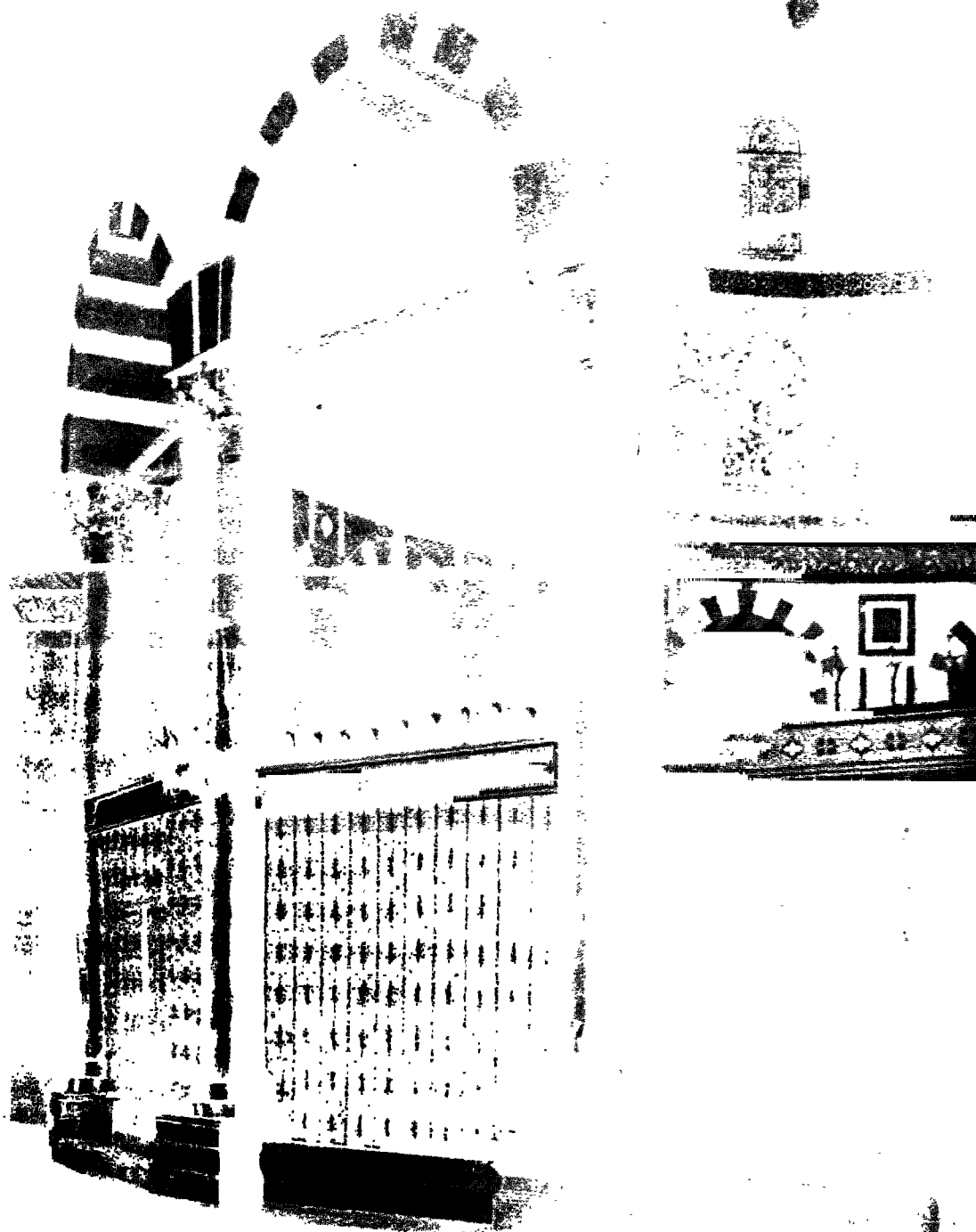


Photo : American Colony Stores, Jerusalem.

FIG. 8. JERUSALEM : INTERIOR OF THE QUBBAT AŞ-ŞAKHRAH
' DOME OF 'THE ROCK '

The Haram ash-Sharīf (the 'holy sanctuary') was, even in those days, by its natural form and by its long historical associations, one of the finest building sites in the world. It occupied the most prominent corner of a city already possessed of a world-wide religious reputation. Its area was considerable and it was bounded on two sides by the lofty walls of Jerusalem. It was probably nearly as level then as it is now, for where the natural rock fell away towards the south vast superstructures had been raised to make the whole area into one great platform. Finally, this had always been regarded as the centre of religious observance in Jerusalem, and here had stood in successive ages the temples of Solomon, of Herod, and of Hadrian. Omar had shown the sound instinct characteristic of the early Muslims in planting his mosque here, but it was left to a later caliph, 'Abd al-Malik, to take full advantage of the site and its ancient reputation. A rival caliph had arisen in Arabia, and it became necessary for 'Abd al-Malik in Damascus to devise some counter-attraction to the twin holy cities—Medina and Mecca,—some place of pilgrimage to divert into Syria the streams of pilgrims who were absorbing revolutionary doctrines at the well of Zamzam. This place he found in the Holy Rock of Jerusalem, already well known and to some extent revered by Muslims, and here he decided to build a worthy mosque that should also outlive all the Christian churches in the city. Having come to this decision, he lost no time in announcing his decision by means of a proclamation throughout his dominions. He then collected a number of skilled craftsmen and a vast sum of money to cover the probable cost of the building. According to Besant and Palmer,¹ this fund was stored in a little treasury adjoining, specially designed by the architect under the Caliph's personal instructions and still surviving as the Qubbat as-Silsilah, or 'Dome of the Chain'. Further, these writers state that this little building was regarded as such a success that it served as a model for the Dome of the Rock. But other authorities do not accept this story, as we shall see later.

The Haram ash-Sharīf as it appears to-day (Figs. 6 and 9) probably presents very nearly the same aspect as when it was laid out by 'Abd al-Malik, an approximately level platform nearly rectangular in shape, measuring about 1,600 ft. from north to south, and 1,000 ft. from east to west. The Holy Rock is situated almost exactly on its shorter axis, but nearer to the west than the east boundary. The great battlemented walls of Jerusalem form the eastern and southern limits of the site. At the south-east angle these walls drop to the deep valley of the Kidron. On the east wall and a little north of its centre is the Golden Gate built by Justinian. On the southern boundary stands the present mosque of al-Aqṣà, and on this spot probably stood

¹ Besant and Palmer, *op. cit.*, p. 87.

Justinian's Church of St. Mary the Virgin. North of the Haram lies the Pool of Bethesda, and beyond it the 'Via Dolorosa'. The principal entrances to the enclosure are now, and must always have been (owing to the configuration of the ground), from the west—the bazaar-quarter. The Dome of the Rock is raised on a large terrace or podium, some 10 ft. high above the general level of the enclosure, and approached therefrom by wide flights of steps, each surmounted by a graceful arcade. According to M. Saladin, these steps and arcades, as well as the terrace, are the work of 'Abd al-Malik, but in regard to the arcades it must be observed that recent authorities give them all a much later date—that on the south side, at the east end A.D. 1211-12; the remainder in the fourteenth and fifteenth centuries, as indeed appears from their design. Nevertheless it is clearly apparent that to 'Abd al-Malik we owe an impressive conception in the general scheme of the mosque in its surroundings. Seldom in Arab architecture do we find any attention paid to vistas or general effects, in fact to what we nowadays group under the convenient head of town-planning. Beautiful as are many of their mosques in design and decoration, they are seldom placed with a view to monumental effect, even when allowance is made for later alterations. And it is curious that few modern writers have laid any stress on this feature of the Dome of the Rock. To myself, after several years spent in the East, it was a revelation of unexpected loveliness to enter the magnificent area of the Haram ash-Sharīf for the first time. In spite of the picturesqueness and charm of the crowded bazaars and lanes of Cairo and Damascus, one finds in this great open *place* with its grass and its cypresses, its border of Arab minarets and portals on two sides, of battlemented walls on the others, with rugged mountains in the distance beyond, and with its freedom from noise and traffic, a perfect setting for the lovely group of buildings, brilliant with blue and green tiles, that forms its central feature. Occasionally one heard the rumble of distant artillery, and an aeroplane passed overhead, but even these sounds could not disturb the peace of this sacred and historical spot.

The design of the mosque itself has given rise to long and bitter controversy. From a welter of confusing theories we can select a few points on which there is general agreement. The building as we now see it (Figs. 7, 8, 9, and 10) consists of an octagonal outer structure, each face of these outer walls measuring about 68 ft. and being divided into seven bays. The walling is of dressed stone in courses. On the north, south, east, and west faces are doorways, each enclosed by a porch, that on the south being the most perfect and the largest. From the accounts of early pilgrims, it appears that the fifty-six windows round this octagon and the four porches existed as early as the beginning of

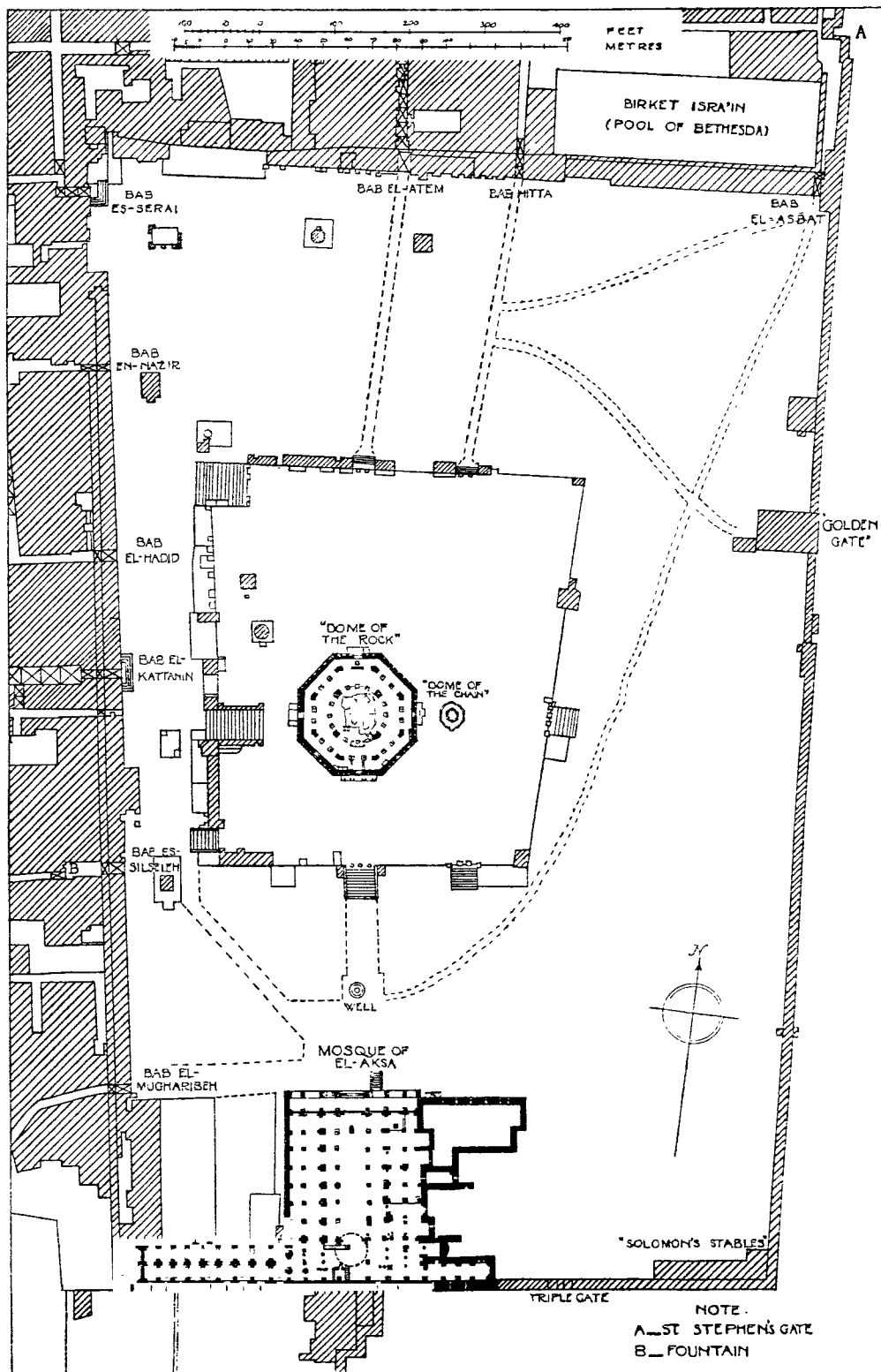


FIG. 9. JERUSALEM: THE HARAM ASH-SHARIF. PLAN

the tenth century, but some authorities consider that the whole of the external walls were rebuilt by the Caliph al-Ma'mūn in 831, while others think that his work was limited to details. In either case it is probable that we see substantially the same type and size of exterior that 'Abd al-Malik erected. But the gorgeous casing of Persian tiles, and the remaining ornamental details of the exterior, are chiefly due to the sixteenth century.

Within the octagonal outer wall is a wide aisle, and then a range of piers and columns, also forming an octagon, with two columns between each pier. From the columns spring semicircular arches, but, as the former are all taken from older buildings, the capitals have dosserets or pulvins below the arch springing. Wooden tie-beams, in later times largely used in Saracenic buildings, connect the dosserets. The capitals of the columns are of Romano-Byzantine type. The inner range of columns and piers is circular in plan, forming a rotunda, with three columns between each of the four piers. In this case the arches spring direct from the capitals of the columns. Again, referring to the descriptions of the building by various mediaeval pilgrims, we find discrepancies as to the numbers of the columns, and from these Rivoira concludes that at some date, probably in the eleventh or twelfth century, the number of columns was increased in order to afford additional strength to the dome and its drum, which are carried on the inner rotunda. Both the present dome and the roof over the remainder of the building are covered with lead on a framework of timber.

According to an old chronicler, the original dome was covered with gold, as after the completion of the building a sum still remained in the treasury, and to this the treasurers added their own private fortunes and the ornaments of their women-folk. The result was so successful that

' . . . it was impossible for any to keep his eyes fixed on the dome, owing to the quantity of gold with which it was ornamented. They then prepared a covering of felt and leather, which they put upon it in winter time to protect it from the wind, and rain, and snow.'

The dome was destroyed by fire in 1448, but was replaced. It is now of double construction, the interior lined with mosaics. Owing to the occurrence of earthquakes in Palestine, wooden domes were generally favoured.

After this brief description it is necessary to define the position of the Dome of the Rock in the history of Arab architecture. In the first place, though the design of the building is remarkable, the plan is not that of the *jāmi'* or congregational mosque, but rather the first

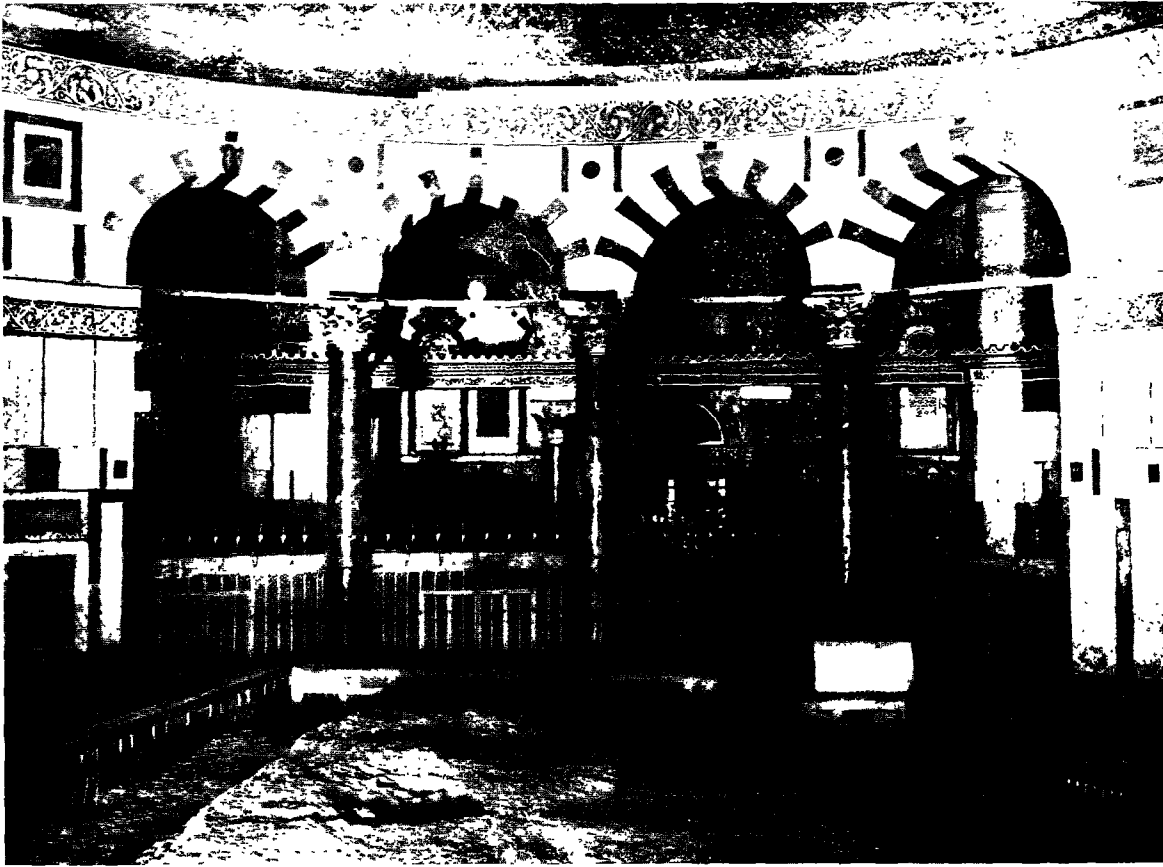


Photo American Colony Stores, Jerusalem

FIG. 10. JERUSALEM: THE QUBBAT AS-SAKHRAH (' DOME OF THE ROCK ')

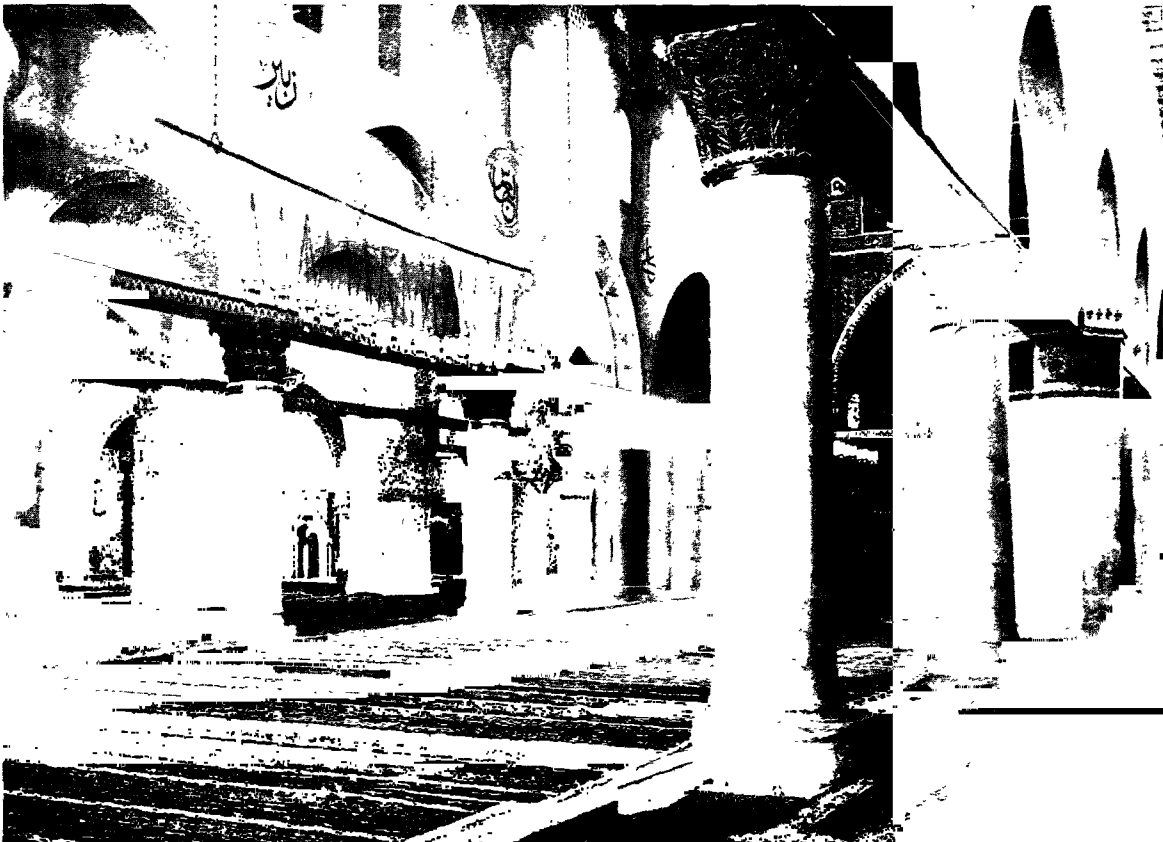


Photo American Colony Stores, Jerusalem

FIG. 11. JERUSALEM: MOSQUE OF AL-AQSA



FIG. 12. DAMASCUS: THE GREAT MOSQUE. COURT



FIG. 13. DAMASCUS THE GREAT MOSQUE
'TREASURY' IN COURT



FIG. 14. DAMASCUS THE GREAT MOSQUE
SOUTH-WEST ANGLE OF COURT

of a line of tomb-mosques, raised over a sacred place. In later chapters we shall draw a distinction between the congregational mosque and the collegiate mosque (*madrasah*). Each of these three types developed on separate lines during the Middle Ages. The domed mosque sheltering the tomb of a saint was called a *Qubba*: hence the Qubbat as-Şakhrāh (Dome of the Rock). The origin of this remarkable plan has been hotly debated. Rivoira maintains that it is of Roman origin and adduces a large number of Roman plans in support of his pet theory. Others, and they are probably in a majority, ascribe the design as well as the construction to architects and workmen from Byzantium. Until learned men have finished their squabbles as to the exact relations between Rome, Ravenna, and Constantinople at this period it does not seem possible to allot the exact measure of responsibility for this 'annular rotunda' plan. It is far more important to know that it was derived from Christian sources, either from or through Byzantium (possibly from Constantine's churches at the Holy Places), and its remoter ancestry, whether Sasanian, Byzantine, Ravennate, or Roman, is not a vital matter here. Neither in the plan itself, nor in the details of construction, was any startling development apparent in the progress of architecture.

From the Dome of the Rock we pass naturally to the small building adjoining it on the east, the Qubbat as-Silsilah or Dome of the Chain. As mentioned above, this little structure was said by the old chroniclers to have served first as 'Abd al-Malik's treasury, and then as a model for the great new mosque. De Vogüé¹ regards it as of equal age with the Dome of the Rock, but Rivoira, after a detailed examination, historical and architectural, considers that this opinion cannot be maintained with any certainty, and that the date may be very much later. Again in this case the columns used are all antique, taken from older buildings.

A third building was erected by 'Abd al-Malik in the Ḥaram ash-Sharīf, the mosque of al-Aqṣā on the south side (Figs. 9 and 11). This forms a most difficult problem in architectural history. The name *al-Aqṣā* means 'the remote', and the Masjid al-Aqṣā referred to in early Arabic chronicles and legends means 'the distant shrine' or 'the remote place of adoration', i.e. remote from Mecca. It appears to have been first applied to the whole of the Ḥaram ash-Sharīf, and later to the mosque of al-Aqṣā that was built there. The site of this mosque was originally occupied by one of Justinian's churches already mentioned, dedicated to St. Mary the Virgin. The difficulty that faces the architectural historian is to decide whether this church lay on precisely the same ground as the mosque, and, if so, whether any part

¹ De Vogüé, *Le Temple de Jérusalem*, p. 104.

of the church was incorporated in the structure of the mosque. Justinian's church was built some time after 530; and its erection took twelve years. De Vogüé considers that it had a basilican plan with three aisles, and simple span roofs of timber carried on two ranges of columns and on corbels on the outer walls. Owing to the great width of the central aisle, or nave, the columns were of very large diameter. When Omar entered Jerusalem he is said to have made his devotions in the church, so that if it had been burned down by the Persians in 614, it must have been rebuilt, but this is not recorded in the list of churches rebuilt by Modestus. In 691-2 it was rebuilt by 'Abd al-Malik, probably with walls of dressed stone crowned with battlements. We have no means of deciding whether he utilized any part of the existing walls of the church, which may or may not have been ruined at the time. A Christian church was normally orientated east and west, but the present building lies north and south in the Muslim fashion. But there seems to be little doubt that the lower part of the present walls of the main aisle of the mosque is due to 'Abd al-Malik, and that the squat marble columns with their stiff Byzantine foliage were taken from Justinian's church. It is not easy to determine the general appearance or remaining features of 'Abd al-Malik's mosque, but Rivoira believes that it possessed at least two new features; a dome over the *mihrāb*, and a T-shaped plan formed by a transept. He is doubtful as to the existence of minarets at this stage of the building. In 746 the greater part of the building was destroyed by an earthquake. It was restored by the Caliph al-Mansūr about 771, after a further collapse, and then another earthquake followed. In 780 it was again restored, or, more correctly, rebuilt, by the Caliph al-Mahdī, who is said to have made it shorter (i. e. from north to south) and wider (from east to west). In the second quarter of the ninth century a large porch or narthex was added on the north side, the main entrance from the Ḥaram ash-Sharīf, with marble columns, but this fell during a later earthquake. Over the 'crossing' or intersection of the main aisle and the transept there was a dome, presumably of wood covered with zinc. Such was the state of the building in the ninth century. Its subsequent history continued to be eventful throughout the Crusades, for its position on an angle of the great wall of the city rendered it liable to damage, and it was used by the Templars in the twelfth century as a Christian church. For this purpose it underwent further alteration, and again at the hands of Saladin when he recovered Jerusalem and restored it for Muslim worship. The dome and north porch were rebuilt, a splendid *mimbar* erected, and pointed arches inserted in the main aisle, while during successive alterations the width was increased to the seven aisles we see to-day. Briefly, then, the present mosque of

al-Aqṣà preserves the main plan of 'Abd al-Malik's building, with its T-plan and dome over the mihrab, as well as Justinian's columns and capitals, but no more.

For the remainder of the period during which the caliphs of Baghdād ruled Palestine Jerusalem appears to have enjoyed a peaceful existence, undisturbed save by the earthquakes already mentioned. A traveller of the ninth century tells of Muslims and Christians living together in conditions of amity and complete public safety.

Reverting to the early years of the Arab conquests, we find that in Damascus, captured in 635, the conquerors did not at first build a mosque. It was believed up to quite recent times that for many years they shared with the Christians the use of the church of St. John, the Muslims taking the eastern and the Christians the western half, though both entered through the great doorway, still existing, of the earlier Roman temple. But Caetani¹ has now proved that this is impossible. It is curious that in Damascus we find conditions nearly identical with those prevailing in Jerusalem. Even before the Christian era there had been some sort of a Greek temple on this site, and remains of buildings as old as the second century B.C. may still be seen. Of the Roman temple that followed abundant traces remain, and the plan of the whole vast area has been reconstructed by Messrs. Spiers and Dickie.² The enclosure measured 1,300 ft. from east to west and 1,000 ft. from north to south and was surrounded by colonnades. At the east and west ends were large gateways. That on the east is largely concealed by buildings, but the great western gateway, at the end of the principal bazaar, remains in a position where it can easily be seen. In style it resembles Diocletian's work at Spalato. The temple itself was raised on a podium in the middle of this great enclosure, and its south doorway still remains in the wall of the present mosque. This temple was appropriated by Theodosius, transformed into a Christian church, and dedicated to St. John in 379. It is said to have been enlarged by Arcadius, the son of Theodosius.

The story of the removal of the caliphate to Damascus in 661 has already been told, and though the joint use of the church may have sufficed in the early days when the Muslims were chiefly concerned with praying and fighting, such an arrangement did not satisfy the Caliph Walid I (705-15), a ruler who was ambitious in his character, luxurious in his tastes, and a keen patron of architecture. According to the traveller Ibn Jubayr (1184):

¹ See *Trans. of Third International Congress for History of Religions* (Oxford, 1908), ii. 333.

² R. Phené Spiers, in *Architecture East and West* (London, 1905), pp. 213-44; id.

in *R.I.B.A. Journal* (London, 1896-7), vol. iv; A. C. Dickie, in *Palestine Exploration Fund Quarterly Statement* (London, 1897), pp. 268-82.

‘ . . . He would have given them another church in exchange ; but the Christians would not agree and they made objections to the act of the Khalifah, and forced him to take their church from them by force . . . and he began to pull down the walls with his own hands. Then the Muslims hastened to his aid, and very soon the whole was demolished.’

The new mosque was then erected in the form it now presents (Figs. 12, 13, 14, 15, and 16), parts of the older temple walls being incorporated in its southern and western sides. The area covered by the mosque is about 530 ft. by 320 ft., of which the great open courtyard accounts for 430 ft. by 125 ft. South of this lies the chief sanctuary, which is entirely enclosed, unlike the congregational mosques of Egypt, Arabia, and North Africa. There has been much discussion as to whether this covered portion of the mosque represents in any considerable degree the plan, or even the structure, of the Christian church. The theory is natural enough, for not only is it certain that a church did occupy almost precisely the same site, but also the dimensions and form of the present mosque, with its three aisles, its transept, and its dome over the crossing, do follow very closely the traditional plan of large basilican churches such as still exist in other parts of Syria. According to Eutychius of Alexandria (876–940), ‘ It was a very fair church which had not its like in all the territory of Damascus ’. Yet both Fergusson and Rivoira agree that a church 450 ft. long by 125 ft. broad, the size of the present covered portion of the mosque, is incredible, for of all the Christian churches in the world only St. Peter’s at Rome exceeds these dimensions. Rivoira further argues very plausibly that whereas in a Christian basilica the transept is usually placed at the end of the building, in this case it is central, and that Walid utilized the transept merely to enhance the effect of his central feature, the *mihrāb* pointing towards Mecca. Rivoira’s sixty-five pages of text and illustrations dealing with the mosque are most difficult reading, for they abound in long and abstruse digressions suggested by the many architectural problems of this epoch-making building. Nor do Spiers and Dickie say very much to elucidate this particular question, while M. Saladin appears to favour the identity of the church and the mosque. On the whole, the evidence is slightly in favour of Rivoira’s view to the contrary, especially as it is known that Walid wished his new building to outshine in size and splendour all Christian churches that he had ever seen. But Damascus still offers great attractions to the industrious archaeologist, and it is probable that further research may yet solve this mystery.

The great court of the mosque is surrounded by stone arcades,

those on the north and south sides consisting of piers, and those on the east and west of piers and columns. It is tolerably certain that on three sides we see Walīd's original arrangement, but the north arcade

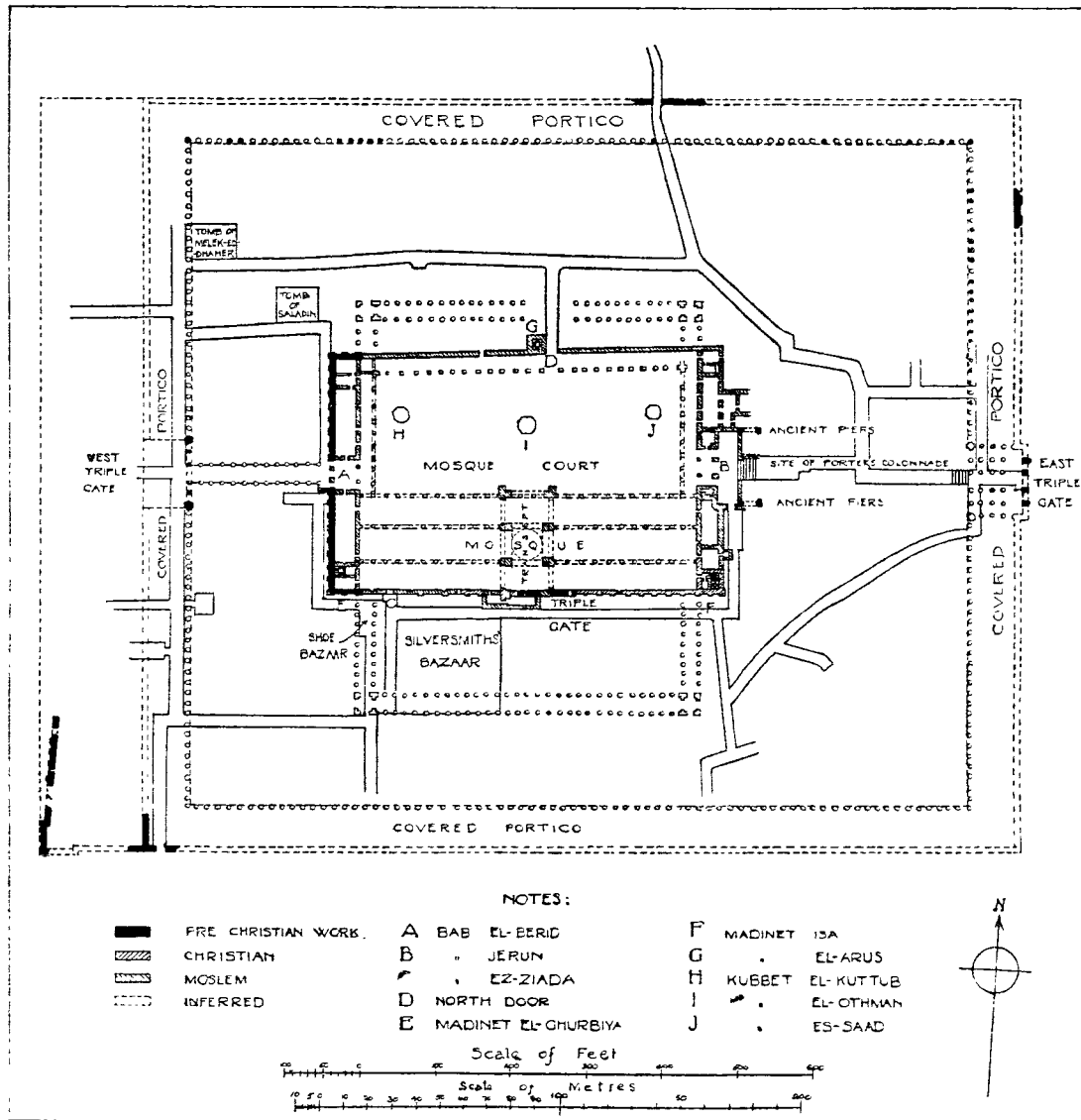


FIG. 15. DAMASCUS: THE GREAT MOSQUE. PLAN.

M.S.B. del., after Dickie.

originally consisted of both columns and piers and was rebuilt in its present form several centuries later. The south arcade, opening into the church, was closed with doors, thereby differing from the usual practice in Cairo and elsewhere, where nothing more substantial than *mushrabiyyah* work was ever used as a screen. These arcades present the first important architectural innovation of the new building—(though

the whole plan is of course a great advance on the primitive structures at Mecca and Medina)—in the shape of the horseshoe arch, which first appeared here as a structural form, and afterwards became the most characteristic feature of the Saracenic style. It assumed two forms, as in this case, where a semicircle is prolonged slightly below the line

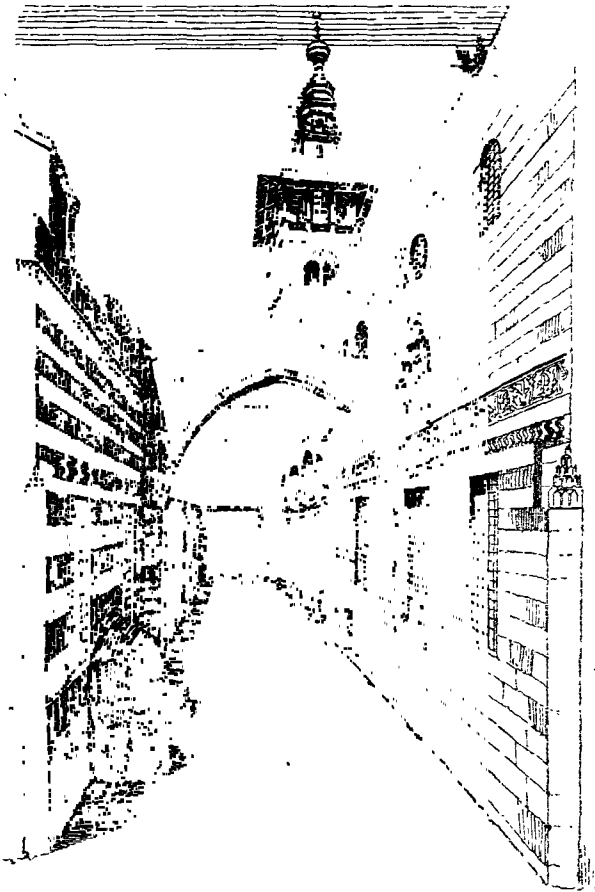


FIG. 16. DAMASCUS: THE GREAT MOSQUE.
THE 'ARŪS MINARET. M.S.B. del.

of its springing, or as in the case of Ibn Ṭulūn's mosque at Cairo, which forms the subject of the next chapter, where a pointed arch is similarly treated. The arcades at Damascus were originally crowned with battlements. In the mosque at Damascus, too, it appears certain that we see the first authentic instance of the use of the *mīhrāb*, the semicircular niche with a domed or pointed head that indicated the *qiblah*, the direction of Mecca. The origin of these two features will be discussed more fully in Chapter III.

It is recorded that a minaret stood at each of the four angles of Walīd's mosque, and if they still survived they would assuredly be the oldest examples in existence. Two of these, on the south-west and south-east angles, were built on the existing angle towers of the Christian building, and this ancient lower portion may still be seen. But

the upper portions, the minaret of 'Isā and the Gharbiya minaret, were built about 1272 and 1483 respectively. The two minarets built on the north of the mosque have disappeared, and the present minaret, the 'Arūs minaret, near the north entrance, which at one time was thought to be of Walīd's period, is now assigned by Rivoira to the tenth century as regards its lower part, to Saladin as regards its main portion with window-openings betraying Western influence of the twelfth century, and to a still later period as regards the light upper structure. We cannot then acclaim this as the earliest known example of an Arab minaret.

The dome at the crossing is believed, from various architectural evidence, to have been an afterthought. The piers carrying it are very massive, measuring 13 ft. by 10 ft. We can only surmise as to the nature of Walīd's dome, but Rivoira suggests that it may well have been modelled on that at Jerusalem, completed only a few years before. Later domes were constructed in 1082 (after the fire of 1069), again after the burning of the mosque by Tamerlane in 1400, and after the great fire of 1893, which destroyed so much of the southern or principal portion, including the basilican arcades, that nothing of the original building except the external walls remained.

There is no doubt that Walīd's original mosque abounded in gorgeous decorations. Muqaddasī, writing at the end of the tenth century, describes these in detail. Marble slabs, mosaics, gold, precious stones, and enamelled tiles covered practically all parts of the building that were not in themselves of ornamental materials. Coloured glass was used in the windows and the *mihrāb* was adorned with agate, turquoise, and gold. Relics of this decoration are still to be seen in the east and west vestibules, including the fine metal-covered entrance doors.

The curious little structures in the great court, though made of ancient columns and materials, are all much later than Walīd's day. On the other hand, the arcades joining the mosque to the Roman gateway on the west, and extending north from the 'Arūs minaret (see Figs. 15 and 16), are probably of the eighth century and are distinctly Byzantine in character.¹

Ibn Jubayr (1184) describes one of the colonnades, and with this quotation I will conclude this very brief study of a remarkable building.

'On either side of this hall [the colonnade] are set columns among which are the rows of shops occupied by the perfumers and the like. Up above is a second row of shops and chambers for letting, and from these you can look down into the hall. All round and about above this is the terrace roof, where the occupiers of the chambers and the shops pass the night (in the summer heats). In the centre of the hall is a large tank rimmed round with marble, and over it is a dome that is supported on marble columns. Round this dome up above is a border of lead that is very broad, and the dome is open to the sky. In the middle of the marble tank below is a spout of brass which throws up water with great force, and it rises in the air for a man's height or more. All round it are smaller spouts which throw up water also, so that the whole looks like the

¹ The latter does not appear to have been known to Dickie or Rivoira, though I saw it when visiting Damascus at Christmas, 1918.

branches of a silver tree, and is most beautiful to watch. The hall that is before the Western gate [of the mosque, called Bab al-Berid] has in it the shops of the greengrocers and perfume-sellers, and there is here the market where they sell flowers.'

Yet, though this is a pleasant picture of Damascus, with its flowers, its running water, and its shade (the three attributes that caused it to be regarded as the Arab's earthly paradise), the reigns of the luxurious caliphs of the seventh and eighth centuries in that city were marked by constant intrigue, unrest, rebellion, and assassination.

There is another early mosque that lies rather outside the area covered by this book, at Qayrawān in Tunis, but it has some historical significance in the chain of development of Arab architecture. It was founded originally in a very primitive form by Sīdī 'Uqbah during his expedition along the coast of North Africa in 670-5. The Arabs were not altogether successful in this campaign, and lost a large part of their army. At the end of the century it was rebuilt, and again in the second quarter of the eighth century, under Bishr, the governor of Qayrawān. A third, fourth, and fifth reconstruction took place before the end of the ninth century. From that date onwards there were numerous alterations, but according to M. Saladin, who has written a learned monograph on the building, it remains to-day substantially as it was in the ninth century. Unlike the large mosques of Ibn Ṭūlūn and the Fāṭimids erected in Cairo in the ninth and tenth centuries, also the Great Mosque of Damascus already described, this important congregational mosque is irregular in form, none of the angles being right angles. It consists of a large court with double colonnades on the east and west sides, an incomplete colonnade with a large minaret placed some distance from the central axis on the north, and a very deep sanctuary or *liwān*, occupying about a third of the total area of the mosque, on the south or Mecca side. The plan of this great sanctuary is singular, and recalls that of the mosque of al-Aqṣā at Jerusalem. Sixteen parallel aisles separated by arcades occupy most of the space, but the central aisle is much wider. At the *mīhrāb* it is covered by a dome, and here meets a broad aisle within the south wall, running the full width of the sanctuary, thus forming the T-plan supposed to have been derived from the Early Christian transept-basilica. The Great Mosque of Cordova, an Umayyad building, also has a wide central aisle and a transept. The mosque of Zaytūnah at Tunis (A. D. 732) has a similar T-plan, but the aisles of the sanctuary run parallel with the *mīhrāb* wall. The arches are supported on antique marble columns of various heights and diameters with correspondingly heterogeneous capitals. As in other early mosques, these columns and capitals are

equalized in height by means of various devices, seldom successful and never producing an effect of architectural uniformity. Above the capitals are thin wooden abaci, above them stone impost-blocks, and from these spring the arches, which are of semicircular form prolonged considerably below the springing-line so that they form a definite 'horseshoe'. The result of this combination of columns, impost-blocks, and horseshoe arches is an effect of extreme lightness and grace, such as one often associates with the various schools of Muslim art in their later developments. But this is marred by the equally characteristic use of wooden ties below the imposts, an undeniable defect found in many Arab buildings. At Qayrawān columns are used in pairs where they support arches intersecting at right angles, thus perhaps foreshadowing the clustered shafts of Gothic vaulting. The remarkable little dome over the 'crossing' of the two wide aisles in front of the *mihrāb* dates from the end of the ninth century, and presents some interesting features, but hardly finds a place in our story at this point. More important to us is the minaret, a massive square tower some 85 ft. high, erected by Bishr in the first half of the eighth century, and thus the earliest example known. At Medina the powerful lungs of Bilāl sufficed to summon the faithful from their neighbouring hovels at prayer. But as the great congregational mosque came into being, a more prominent coign of vantage became necessary for the *mu'adhdhin*, and thus the minaret was evolved. At Qayrawān we have no indication of the nature of the upper portion, for the present top stage and cupola are modern, and the date of the intermediate stage is uncertain. It is a far cry from this rough sturdy tower to the slender beauty of Qāyt-Bāy's famous minaret outside Cairo, but we may assume that even in the early days some form of simple loggia or shelter served to shade the *mu'adhdhin* while he recited his lengthy *adān* and to crown the lofty tower. This mosque at Qayrawān is mentioned here because it does indicate a certain stage in development between the Great Mosque of Damascus and the mosque (greater still to the architect) of Ibn Ṭūlūn at Cairo, which forms the subject of the next chapter. It shows us, in the middle of the ninth century, the congregational plan, consisting of a great court surrounded by colonnades, that on the south very deep; a semicircular *mihrāb* flanked by marble shafts, lined with costly marble panels from Baghdād, and crowned with a semi-dome, all richly decorated; horseshoe arches throughout; antique columns and capitals supporting impost blocks for the arches; wooden tie-beams between the arches; and a lofty minaret.

To any reader who has previous acquaintance with the subject, or who has visited Cairo, it may seem strange that this chapter contains no reference to the celebrated mosque of 'Amr south of that city,

founded by the famous Muslim conqueror of Egypt and Palestine when he laid out al-Fuṣṭāṭ ('the town of the tent') in 641-2. The omission is intentional, for it is now established that the somewhat ruinous building still in existence cannot represent in any part the original structure of 'Amr, and very little if indeed anything earlier than the days of Saladin. So although the present plan may be, as Creswell states, as early as the year 827, it is quite misleading to give, as most writers previously have done, elaborate descriptions and illustrations of this mosque as an example of a period to which it cannot possibly belong. In fact, although 'Amr did erect a mosque on this site, and though it was wholly or largely rebuilt within thirty years, not a trace remains of these or any other Muslim buildings of the early centuries, when Cairo was already a rich and important capital, until the times of Ibn Ṭūlūn, the real founder of Arab architecture.¹

¹ The history of the vicissitudes of this mosque is given in great detail by Rivoira, *Moslem Architecture*, pp. 23-8.

BIBLIOGRAPHY FOR CHAPTER II

- Carpenter, R. H. Article on early mosques at Mecca, Medina, &c. (in *R. I. B. A. Transactions*). London, 1883.
 Corbet Bey, E. K. The History of the Mosque of 'Amr at Old Cairo (in *Roy. Asiatic Soc. Journal*). London, 1890.
 Dickie, A. C. The Great Mosque at Damascus (in *Pal. Explor. Fund Quarterly Statement*). London, 1897.
 Fergusson, J. *The Holy Sepulchre and the Temple of Jerusalem*. London, 1865.
 Hanauer, Rev. J. E. Articles on the Great Mosque at Damascus (in *Pal. Explor. Fund Quarterly Statement*). London, 1911-12.
 Hartmann, R. *Der Felsendom in Jerusalem*. Strassburg, 1909.
 Palestine Exploration Fund. *The Survey of Palestine (Jerusalem volume)*. London, 1884.
 Porter, Rev. J. S. *Five Years in Damascus*. London, 1855.
 Saladin, H. *La Grande Mosquée de Kairouan*. Paris, 1899.
 Spiers, R. P. The Great Mosque at Damascus (in *R. I. B. A. Journal*, vol. iv). London, 1896-7.
 de Vogüé, M. *Le Temple de Jérusalem*. Paris, 1854.

Also general references in the following works cited on pp. 18-19: Baedeker (both books), Comité, Coste, Creswell, Devonshire, Diez, Franz (both books), Fergusson, Gayet, Herz (both books), Jomard, Lane-Poole (all books), Margoliouth, Migeon, Prisse d'Avennes, Rivoira, Saladin, Saladin et Migeon, Spiers (both articles).

III

THE MOSQUE OF IBN ṬULŪN AT CAIRO

(A. D. 868–969)

THOSE who object to the description of the building work of the Muslims in the Middle Ages as 'Arab' architecture do so on the grounds that the Arabs were incapable of any sort of artistic expression. They urge that these wild and fanatical desert nomads cared for nothing but the Qur'ān and the sword, and that such noteworthy buildings as were in fact erected during the early centuries of the Caliphate were the handiwork of Coptic or Byzantine or Persian or even Hindu artists employed by the conquerors. The strongest argument against this point of view is that the various writers, who only agree in denying any credit to the Arabs, themselves disagree most violently as to the common source of inspiration. Gayet finds it in Coptic Egypt, Dieulafoy in Persia and Mesopotamia, Havell in India, and Rivoira in Rome. Each is convinced of the futility of the theories held by the other four. Other writers, including Saladin, Lane-Poole, and Herz, are less biased in their opinion and are content to allow a share of the honours to all of the five sources mentioned above. But there remains yet another and a less obvious quarter of the then known world that left its mark on the architecture of the early Muslims.

In the ninth century the Turkish tribes of Central Asia were already in contact with the north-eastern frontiers of the Muslim empire. Turkestan, with its cities of Bukhārā and Samarqand, was conquered early in the eighth century, and eventually furnished Muhammadanism with a whole nation of loyal and virile converts, destined to play a great part in the subsequent history of Islam. Accustomed as we are to hear of Turkish misgovernment and backwardness, it is curious to find that many of the chief monuments of Arab architecture in Cairo and elsewhere were produced under Turkish governors, and as a rule under their direct inspiration. The most partisan theorist cannot twist this fact into a coincidence, and it is reasonable to conclude that the Arabs did produce a definite style of architecture of their own, drawing their inspiration alike from East and West; that under the firm rule of various Turkish governors architecture and architectural decoration was able to progress more rapidly than under the weaker sway of earlier Arab viceroys; and that these Turkish governors

probably contributed something to the common stock formed of Coptic, Persian, Byzantine, Roman, and Hindu elements.

The caliphs at Baghdād employed numbers of white Turkish slaves whom they called *mamlūks*, or, as the word is more commonly transliterated, 'mamelukes'. Assassination and treachery were so common in the capital that the fidelity of these slaves was usually rewarded with freedom, and later with valuable appointments. The son of Hārūn ar-Rashīd formed a bodyguard of Turkish mamelukes at his court. In the year 815 there came to Baghdād a slave named Ṭulūn, a present to the caliph from the governor of Bukhārā. This slave rose to an important position, and his son Aḥmad Ibn Ṭulūn ('Aḥmad son of Ṭulūn'), born in 835, received a good education. He studied the Arabic language and the Qur'ān, law, and divinity, at first in Baghdād, later at Tarsus, and also received military instruction in the caliph's new capital of Sāmarrā, on the Tigris above Baghdād. This last fact is of the utmost importance to the student of Arab architecture, for at Sāmarrā in 846-52 the caliph Mutawakkil had just completed a mosque which some writers believe to have served as a model for Ibn Ṭulūn's later mosque at Cairo, and which certainly supplied him with a *motif* for the design of his minaret there.

In 868, having rapidly risen to high favour at court, Ibn Ṭulūn was appointed Governor of Egypt, and entered Cairo in September of that year. The sixteen years of his rule were at first marked by great improvements in administration, and by works of building and decoration in his capital, but eventually he became practically independent of the caliph, added Syria, Palestine, and Libya to his dominions, and died on active service at a comparatively early age in 1884. He appears to have been an able ruler—competent, generous, honest—but cruel.

Cairo, as he found it in 868, lay considerably to the south of the modern city. It comprised only the suburbs of Fustāt and al-Askar, the former founded by 'Amr in the seventh century north of the Roman fortress of Babylon (in the district now known as 'Old Cairo', *Maṣr al-Atīqah*), and the latter of rather later date, adjoining Fustāt and consisting of military cantonments. Ibn Ṭulūn added to these a new quarter farther north, partly to house a large army, raised for an expedition into Syria and then left on his hands. This city he called al-Qaṭā'i' ('the wards'), as it was divided into different wards for the various nationalities living within its boundaries. (A modern parallel is to be found in the beautiful little town of Ismailia on the Suez Canal, where two groups of squalid hovels isolated from the European and Arab quarters are known as as-Sūdāniya and al-Arīshiya, the abodes of the Sudanese and the natives of al-Arīsh respectively.) The position of al-Qaṭā'i' corresponds roughly with the present 'Ṭulūn quarter' of

Cairo, a poor and dirty neighbourhood where the British sightseer is treated with scant respect. This royal suburb must have presented a very different aspect at the end of the ninth century, if the chronicles of the period are to be trusted. It covered a square mile in area. Within its boundaries lay a palace, a parade ground, a hospital, the great mosque that forms the subject of this chapter, baths, markets, and all the buildings of a civilized capital. Large and luxurious houses sheltered the principal officers of the court, beautiful gardens surrounded them, and the bazaars were stocked with every sort of merchandise.

From a deep well on the slopes of the Muqattam Hills, water was raised by a *sāqiya* and brought in an aqueduct to the new city. A story is told of the building of this aqueduct that has a bearing on our subject. Riding out over the desert one day Ibn Ṭulūn paid a visit to the work in progress. His horse unfortunately stumbled in a heap of mortar, and the governor thereupon promptly consigned the architect, a Copt, into gaol, and substituted 500 blows for the fee of 500 dinars due to him. The sequel of this incident will appear a little later. Meanwhile it may be noted that portions of this aqueduct still exist, and are of architectural importance. Creswell¹ and Corbet² agree that the remains—which are to be distinguished from the later and better-known aqueduct connecting the Nile and the Citadel—do represent the work of Ibn Ṭulūn, giving as their reasons that the brickwork resembles that in the mosque, and that there is a close similarity also in the form of arch used. Creswell dates this aqueduct 869–76, on the strength of Maqrīzī's story of the Coptic architect, but discredits the rest of the story. He also omits any reference to Ibn Ṭulūn's reputed restoration of the Nilometer on Roda Island, mentioned by Lane-Poole. No vestiges exist of the fortress on the island built at the same time.

The great congregational mosque erected by Ibn Ṭulūn in the centre of his new royal suburb is perhaps the most important building in the whole history of Arab art. Although it stands to-day bare and deserted, its ornamental features decayed or altogether ruined, it still presents the type of the mediaeval mosque of the larger kind. The date of completion is definitely established as 879, though Rivoira questions Maqrīzī's statement that it was commenced in 876, and assigns a date three or four years earlier. Lane-Poole states that the building took two years, and that the cost was 120,000 *dinars*³ (about £63,000). The total area of the site is some 6½ acres.⁴ In shape the

¹ Creswell, p. 42.

² Corbet, p. 532. For titles of books see bibliography at end of this chapter.

³ The value of a *dinar*, or 'piece of gold', was then about 10s. 6d., according to Lane-

Poole.

⁴ All these dimensions are taken from R. Williams. See bibliography at end of this chapter.

50 MOSQUE OF IBN ṬULŪN AT CAIRO

buildings form very nearly a perfect square (530 ft. by 533 ft.). The great central court also forms a square (302 ft. by 300 ft.), and is surrounded by arcades, five aisles deep on the sanctuary or Mecca (south) side, two aisles deep on the remaining three sides. A new feature in this mosque is the *ziyāda* or outer court that surrounds it on the east, west, and north sides. This court has a width of 67 ft., and is obviously intended to form a narthex or approach to the main place of worship, and thus to shut out the world and its noises. In practice they became the resort of students and beggars. The north *ziyāda*

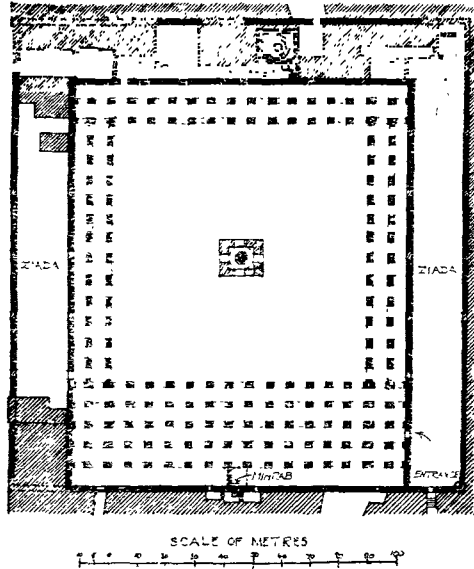


FIG. 17. CAIRO: MOSQUE OF IBN ṬULŪN.
PLAN

contains an ablution-place with latrines attached, also the principal minaret. South of the *mihrāb* wall Ibn Ṭulūn built the Dār al-Imāra or Government house, but this has since disappeared. From the east *ziyāda* six entrance portals led into the east *liwān* or arcade, but these are now all blocked up save one. Lane-Poole says that there were formerly two entrances from each portion of the outer court, and sees in this plan an echo of the ancient Egyptian temples, such as Edfu, where a succession of courts leads up to the main sanctuary. The great central open court (*sahn*) is a feature of the *jāmi'* (congregational mosque), and is intended to accommodate the

numerous worshippers on the occasion of the Friday prayers. The familiar word 'mosque', applied indiscriminately to a *jāmi'*, a *madrasah*, or a tomb-mosque, is derived originally from the Arabic *masjid*, meaning a place of prostration (in prayer). Early pilgrims described the whole area of the Ḥaram in Jerusalem by this name, thereby causing a good deal of confusion to later students. *Masjid* in Egypt was pronounced *masgid*, and thence through the Spanish *mezquita* the word finally reached our own language in its present form.¹ In the centre of the court stood a small domed building described by Corbet, who quotes an early chronicler. It had latticed windows on all sides, was supported on ten marble columns and surrounded by sixteen others. It appears to have been a pentagon with two columns at each angle. It was paved with marble, and contained a marble basin from the middle of which a fountain shot up into the air.

¹ Le Strange, *Palestine under the Moslems*, pp. 94-7.

'The dome was ornamented with the signs of the Zodiac and was used for the call to prayer. This *Fawwārah*, as our authorities call it, must not be taken for an ablution-place; it was merely an ornamental feature in the building. When the Mosque was first opened for prayer, one of the criticisms passed on it was the absence of any place of ablution; and Aḥmad replied that he had purposely omitted it, because of the uncleanness which it brought, but he would now have one built behind the Mosque, which he accordingly did.'

This central fountain became a characteristic feature in the larger mosques, but the one just described was burned down in 986, rebuilt in 995, and finally replaced by the present large and very different structure in 1296.

The main feature of the great new mosque, however, was the introduction for the first time of piers and pointed horseshoe arches in place of the antique columns previously used. This innovation is accounted for by Maqrīzī, the Cairo historian and topographer, whose *Khīṭaṭ*, written in 1420, form the chief source of information for that city. He quotes 'the Chronicler of Ibn Ṭulūn' to the following effect. When the *amīr* (governor) was informed that 300 columns would be required for the new mosque if the ordinary method of construction was adopted, and that this would involve the destruction of a large number of provincial churches, he was very much troubled and declined to authorize the work. This difficulty came to the ears of Ibn Kathīr al-Farghānī, the unfortunate architect of the aqueduct, who was still languishing in prison. He is described by Maqrīzī as a 'Christian', but Rivoira declines to admit that he was a Copt, as this would interfere with his argument that the Copts did not originate Arab architecture. However, as Lane-Poole points out, Maqrīzī would have used the word *Rūmī* to denote any other Christian than a Copt. The imprisoned architect saw in the *amīr*'s dilemma a chance of release. He wrote to Ibn Ṭulūn and undertook to build him a mosque of the requisite size without employing a single column except the usual pair flanking the *mihrāb*. He was brought before the governor and offered to draw a plan for him on the spot, if parchment could be brought to him. Ibn Ṭulūn was surprised and delighted with the result, released the architect immediately, arrayed him in a rich robe, and paid him the sum of 100,000 *dinars* (over £50,000) to enable him to commence operations at once.

Should any architect reading these pages be disposed to envy the Copt's good fortune, it should be explained that he was master-builder as well as architect, so that this large sum of money was not by any means a fee for the design but a payment on account of the building. And at

the price of a preliminary imprisonment to satisfy the whim of a cruel despot, it does not appear probable that the lot of a professional man in the ninth century was a happy one. One has only to read the stories of Ibn Ṭulūn's treatment of his medical advisers to be assured of that.

A writer of the eleventh century, al-Qudā'i, is also quoted by Maqrīzī. His story is that Ṭulūn stated that his intention was to erect a building which would stand even if the rest of the city were burned, therefore he avoided the use of marble altogether and timber as far as possible, and employed burnt bricks wherever practicable. In later years three other large congregational mosques (those of Ḥakīm, Baybars, and Barqūq) were built in or near Cairo with piers instead of columns. The same writer, and also Ibn Duqmaq (*d.* 1406), state that this mosque was copied from the one at Sāmarrā, already mentioned. These three statements are not contradictory, and may be combined in one simple theory, that Ibn Ṭulūn desired to construct a mosque which should not be dependent on marble columns—these involving a destruction of older buildings and at the same time offering no security against fire—that he employed a Coptic architect, and that he modelled the new structure on the mosque at Sāmarrā, familiar to him in his youth. Whether this theory can be substantiated is another matter, as we shall soon see.

There is no reason to doubt the first part of it. The use of marble columns was unsatisfactory in many ways besides the two stated above. They were of very different diameters and lengths, necessitating the use of bases of varying height to bring them into line to carry either arches or a roof. They were seldom of sufficient length to carry an arcade, and in order to increase their height impost-blocks were sometimes employed, as at Qayrawān. There was a difficulty in providing adequate support at the point where two arches met at right angles, and at Qayrawān two columns were used in this case. Lastly, there was always a certain fear that marble columns of comparatively slender girth would not suffice to resist the thrust of the arches above, so that timber tie-beams were used to distribute the stress as widely as possible. This was an expedient continued long after the times of Ibn Ṭulūn, but if we are to believe the statements of the old chroniclers that he was a man of taste and of enterprise—as all that we know of him tends to confirm—then we may well believe that he aspired to some more satisfactory solution of these problems than had hitherto been found.

It is a matter of little importance whether the architect was seized with a sudden inspiration while he was imprisoned in a Cairo gaol, or whether the ultimate design was entirely his own work or in some measure that of the *amīr* himself. No facts have been advanced to disprove the common tradition that he was a Copt, and it is equally

certain that he, or he and his employer together, produced a building of the greatest significance in the history of architectural development. It only remains to determine the source or sources from which inspiration was drawn for the design, whether from Sāmarrā or elsewhere.

The plan of the mosque presents no remarkable features. It is a normal development of the primitive congregational type evolved at Medina, and afterwards elaborated at Fustāt, Damascus, and Qayrawān. It is a slight advance on any of these by reason of its symmetry and by the addition of ziyādas or outer courts. The striking innovation is the use for the first time in architectural history of a structural pointed arch, carried on piers. Are we to find the origin of this remarkable feature at Sāmarrā?

The great mosque at Sāmarrā, erected in 846-52 by the caliph Mutawakkil at a reputed cost of 500,000 *dinars*, had received comparatively little attention from archaeologists up to ten years ago. In 1911 Miss Bell published an account of the building,¹ illustrated with plan and photographs, and the outbreak of war in 1914 put an end to the researches of a German party under Dr. Herzfeld, but some of their discoveries have already appeared in book form.² In the last year of the war this building became very familiar to a number of Englishmen, for, as the photograph shows, the trenches ran close to its walls. We have thus ample material to enable us to form a judgement

as to the part played by this mosque in the design of Ibn Ṭulūn's more celebrated building at Cairo. It lies some distance to the north of the old walled town of Sāmarrā, which contains a large mosque of Persian type and of later date, near the River Tigris. It is of enormous size, measuring, according to Miss Bell, 240 by 157·60 metres inside the walls. At each angle of the wall are massive circular towers, and along the walls are smaller semicircular towers at regular intervals. In the south (Mecca) wall is a range of windows with remarkable cusped heads. It

¹ Miss G. L. Bell, *Amurath to Amurath* (London, 1911), pp. 231-5.

² Ernst Herzfeld, *Samarra* (Berlin, 1907); id., *Ausgrabungen von Samarra* (Berlin, 1912).

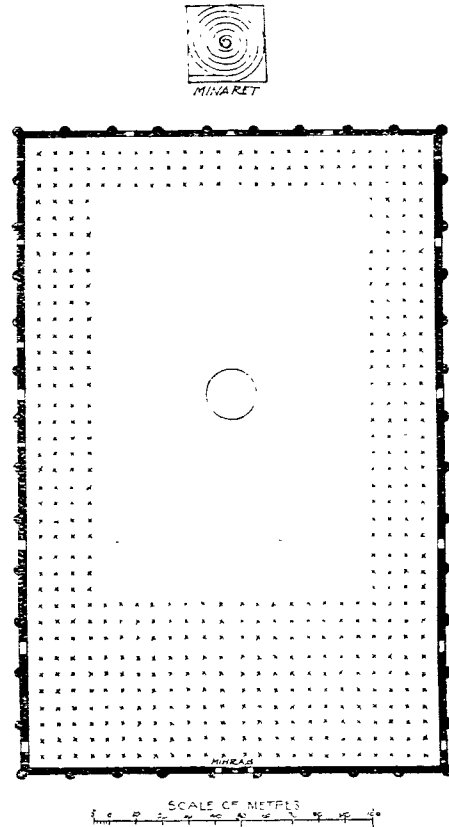


FIG. 18.
SĀMARRĀ (MESOPOTAMIA): GREAT MOSQUE. PLAN. After Sarre-Herzfeld

was once thought that the roof was carried on columns, either of wood (according to Miss Bell) or of marble (according to Muqaddasī, writing in the tenth century). Rivoira at first took the same view. But it was discovered later by Herzfeld that the supports consisted of brick piers, in the form of an irregular octagon on plan, resting on square bases measuring 2·07 metres each way. At each angle was a marble shaft, circular or octagonal, with an average diameter of 0·30 metres. Metal

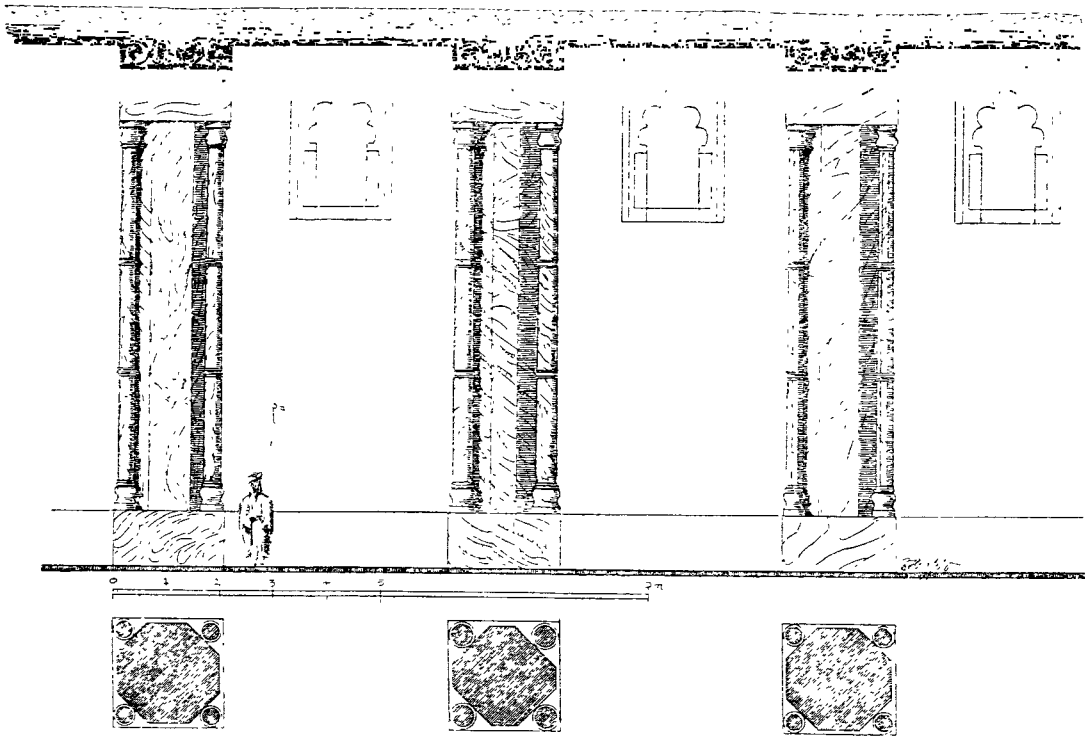


FIG. 19. SĀMARRĀ (MESOPOTAMIA): GREAT MOSQUE. DETAILS OF CONSTRUCTION. From Sarre-Herzfeld

dowels were used in the jointing of these shafts, which had bell-shaped capitals about 0·50 metre high. The height of these columns was about 10 metres, and above was a flat ceiling of timber and mud. In fact Mesopotamia was pre-eminently the home of brick construction, and it is natural to assume that Ibn Ṭulūn's thoughts turned eastwards when he was seeking for an alternative to marble columns. According to Le Strange,¹ Hārūn ar-Rashīd, at the beginning of the ninth century, rebuilt Manṣūr's earlier mosque of fire-baked bricks. But it is a manifest exaggeration to state that either the plan itself or the general principles of construction were copied from Sāmarrā. Gayet propounds the theory that Mesopotamian art in the time of the Baghdād caliphs was

¹ Le Strange, *Baghdād during the Abbasid Caliphate* (Oxford, 1900).

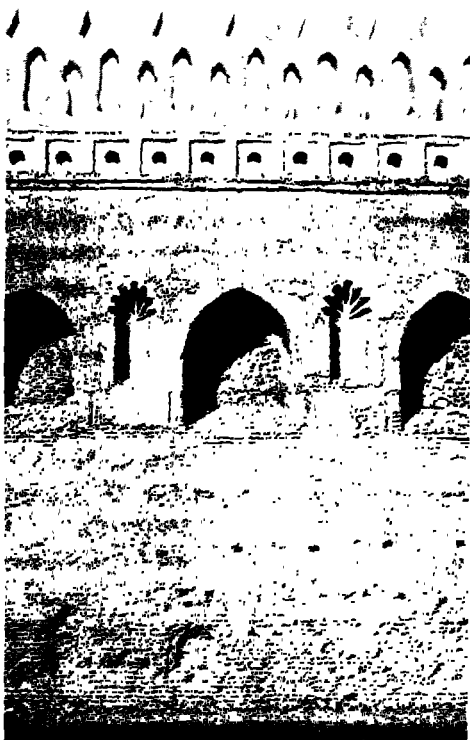


FIG. 20. CAIRO : MOSQUE OF IBN-ṬULŪN
Detail of exterior



FIG. 21 CAIRO · MOSQUE OF IBN ṬULŪN
Mihrāb and Minbar



FIG. 22. SĀMARRĀ (MESOPOTAMIA) : THE GREAT MOSQUE
View from the air

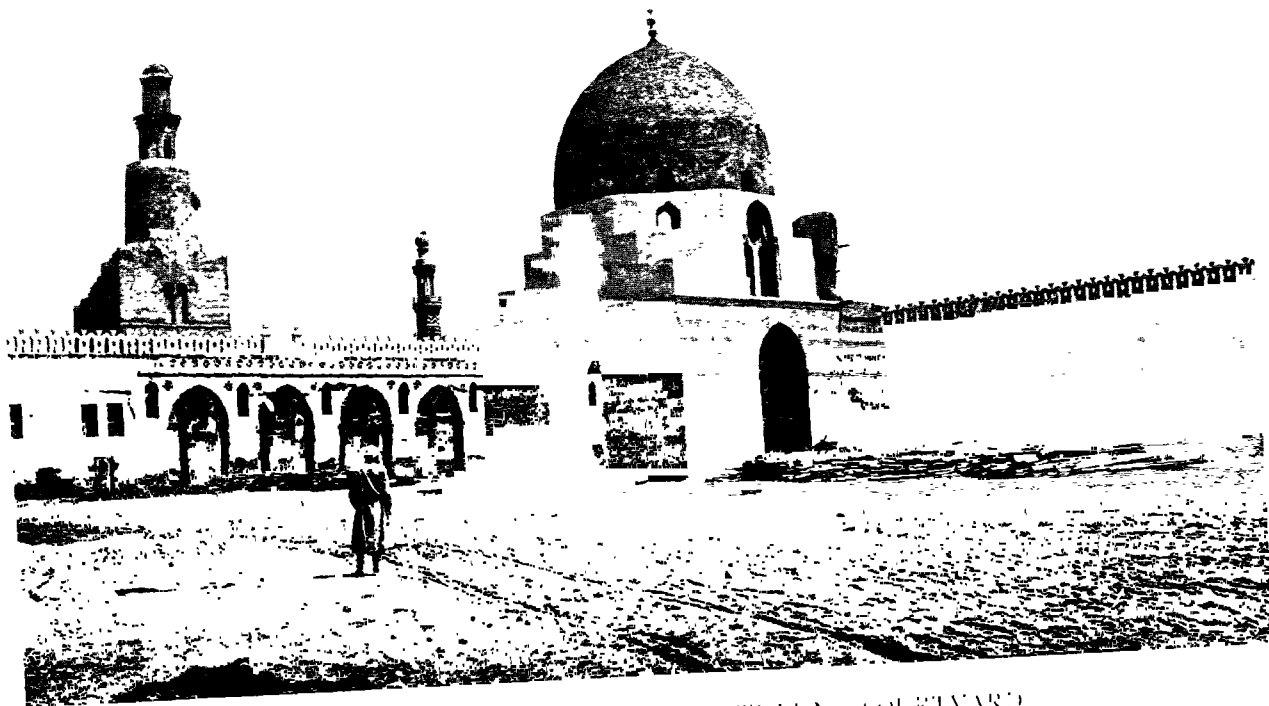


FIG. 23. CAIRO : MOSQUE OF IBN TULUN. COURTYARD



FIG. 24. CAIRO : MOSQUE OF IBN TULUN. AISLE OF PRINCIPAL LIWAN

entirely the work of Coptic craftsmen sent there from Egypt, but in view of what we know of the buildings of the Sasanian kings such special pleading becomes absurd. Similarly, Rivoira in his book (p. 143) states that 'the multifoil arch occurs at Sāmarrā . . . but it is never found in Ibn Ṭulūn's building', and on the plate opposite that page reproduces an illustration of the outer wall of Ibn Ṭulūn's mosque, showing a long line of niches which are an exact replica of the unusual multifoil arches of Sāmarrā, illustrated in Miss Bell's book (Fig. 142) ! It is unnecessary to dwell on this inconsistency, and there is no doubt whatever that Ibn Ṭulūn did borrow extensively from Mesopotamia.

Before considering the origin of the pointed arch, we may discuss the source, if any, of the design of the remarkable 'corkscrew' minaret of Ibn Ṭulūn's mosque. Hitherto we have found only minarets consisting of a plain square tower, massive rather than slender, and with no definite evidence of any superstructure forming a *loggia* or shade for the *mu'adhdhin*. But this example consists of a square portion below, 28 ft. square and 67 ft. high,¹ with a circular stage above it, 20 ft. in diameter and 29 ft. high, round which runs an open stone staircase. There are two more polygonal stages above, of very different design and of obviously later date. The total height of the minaret is 130 ft. For once we find a measure of agreement among recent writers, that the circular portion at least, with its staircase, is the work of Ibn Ṭulūn; and Creswell, a very painstaking critic, is convinced that the lower portion is more recent and that it probably conceals a minaret that was once circular in all its height, possibly with a winding external staircase from top to bottom. He bases his statement on a careful examination of the masonry of the two portions of the minaret; also upon the form of the arches built in the walls of the lowest stage, and of the larger arches connecting it with the main north wall of the mosque. (It is interesting to note that this minaret is of hard Muqattam limestone, whereas its alleged prototype, about to be described, is a brick structure.) Architectural evidence thus goes to confirm the traditional belief that this minaret was copied from the 'Malwiyyah tower', standing close to the north wall of Mutawakkil's mosque at Sāmarrā, a remarkable structure resembling the curious Assyrian *ziggurat*, or staged towers. The Malwiyyah tower, with its strange silhouette rising from the desert, must have puzzled many a stolid British soldier in the neighbouring trenches during the last year of the war. He may have recalled childish thoughts of the Tower of Babel, and perhaps he would have nearly approached the truth. Not far away, visible indeed from the top of the Malwiyyah tower, rises another, less perfect but very similar, the minaret of the mosque of Abū Dulaf.

¹ All these dimensions are taken from R. Williams (see bibliography at end of chapter).

Of Ibn ṬŪlŪn's minaret and of the Malwiyyah tower two almost identical stories exist in the old chronicles, and it seems probable that they have a common origin in some far-distant tradition. It appears in the writings of Maqrizī and in the earlier works of Ibn Duqmaq and Abu'l-Maḥāsin. It is said that one day Ibn ṬŪlŪn was thoughtlessly toying with a piece of paper in the presence of his architect, that he was suddenly conscious of being observed in an act of frivolity ill-befitting so stern a monarch, and that he thereupon ordered the architect to take the spiral form that the paper had assumed in his hands as a model for the new minaret of his mosque. There is probably no truth in the story, but it goes to prove that the forceful *amīr* must have been a great trial to his professional advisers.

Leaving Sāmarrā and returning to the mosque at Cairo, we are next confronted with the most difficult problem of all, the origin of the pointed arch. There is no doubt that this is the very earliest example extant of a pointed horseshoe arch being used structurally in any building of importance, probably in any building at all. Rivoira has devoted several vigorous pages to an examination of this important question, and for once he seems content to admit that this architectural form was not derived from Rome. It may have been anticipated by the arches in the Nilometer at Cairo, said to have been designed by an architect from Farghāna in Turkestan, but the exact date of this is not certain. The round horseshoe arch is said to have been originated in the Visigothic churches of Northern Spain, but this theory has been demolished by Rivoira after a most searching and exhaustive analysis, forming the third and perhaps the most valuable part of his book. In this position he is supported by M. Dieulafoy,¹ who in other matters is usually an opponent. Rivoira concludes his argument as follows :

‘ With one exception, all the religious buildings of Spain ascribed to the Visigothic age fail to make good their claims ; and in the one authentic case, the church of Elche, the round arch is used.’ . . . ‘ The legend of the systematic use of the horseshoe arch in these lands at that period is discredited.’

The initial error arose from a mistranslated and much-quoted passage of Isidore of Seville (599–636), from which it appeared that this feature existed in Spain prior to the Muslim conquest. It was thought by others that the Arabs introduced it soon after they invaded the country. But it will now be generally agreed that it was first used by the Umayyads in their mosque at Cordova (756–96) (and perhaps developed from the earlier Umayyad mosque at Damascus already described), and borrowed from them by the refugee Christians in the mountains of Asturias.

¹ Marcel Dieulafoy, *Art in Spain and Portugal* (London, 1903).



FIG. 25. CAIRO : MOSQUE OF IBN ṬULŪN. ARCADE IN PRINCIPAL LĪWĀN



FIG. 26. CAIRO : MOSQUE OF IBN TULUN
Detail of principal Mihrab

The pointed horseshoe form came to Cairo from the East, but there is some doubt as to its origin. Rivoira illustrates two small Indian temples of the seventh century in which it occurs, but in each case carved out of a solid block. Havell¹ maintains that we owe both this form and the 'Gothic' pointed arch to the niches of early Buddhist temples. There is no doubt that intercourse between Egypt and India was very frequent, that Indian artists worked for Hārūn ar-Rashīd at Baghdād, that the simple pointed arch was first found at Ctesiphon where merchandise from India was transferred to the west-bound caravans, and that Indian wood and other rare materials were sent to Cairo, Syria, and Arabia. But nevertheless the fact remains that the mosque of Ibn Ṭulūn is the first known building of certain date where the pointed horseshoe arch was used constructively and systematically. (But another example may be found to be of slightly earlier date, the mosque of Abū Dulaf near Sāmarrā, where there are certainly pointed arches resembling those in the mosque of Ibn Ṭulūn.)

The arches, originally 171 in number, are now reduced to 158. The outer (northern) arcade of the sanctuary had to be removed early in the nineteenth century, after being damaged by an earthquake, and this accounts for the above reduction. They are 15 ft. wide, and the supporting piers are 4 ft. thick, 8 ft. wide, and 14 ft. 9 in. high. It is owing to these sturdy dimensions that the architect dared to dispense with the timber ties used for connecting the imposts of marble columns, where columns had previously been used. Yet dovetailed wooden plates are used round the top of these massive piers to strengthen them! At each angle of the pier is an engaged column, with a simple floriated capital surmounted by a plain square abacus. The bases of these piers are so much more graceful than most early Arab examples that some authorities ascribe them to later restorations. In the design of these columns Eastern influence, Persian or possibly Indian, is apparent. Round the faces of the arches ran a deep band of delicately incised stucco ornament—stiff, flat, and conventional in character. The soffits of the arches were similarly ornamented, and during 1919 several hitherto unknown portions of this ornament were uncovered, and subsequently described in a recent number of the *Burlington Magazine*.²

The roof is constructed of sycamore-planks, coffered into panels, resting on heavy beams, and at least part of it is original. Over the planks were laid earth, lime, and slabs, as usual in this Eastern city where rain is almost negligible. The beams rested on shallow corbels. The beams and panels were decorated with patterns in paint, chiefly white and red. There are no mouldings on the woodwork, but chamfers

¹ E. B. Havell, *Indian Architecture* (London, 1913).

² See Bibliography at end of chapter.

were used instead. One of the most remarkable features of the whole mosque, the ornamental wooden frieze just below the roof, carved with 'Kufic' characters, is described in a later chapter when the question of this important ornamental feature is discussed.

The construction of the walls is of fire-burnt dark-red bricks (measuring about $7\frac{1}{2}$ by $2\frac{1}{2}$ by $1\frac{3}{4}$ in., according to Wild¹; Corbet gives his dimensions in centimetres, agreeing with Wild except as to width, which he gives as $3\frac{1}{5}$ instead of $2\frac{1}{2}$ in.). The mortar is made from lime, obtained probably from the neighbouring quarries at Turrah and Massarah, and the joints are very thick. The bond used corresponds to our 'English bond', but, as an expert authority² has pointed out, is really the bond used centuries earlier by the ancient Egyptians. The walls are covered with plaster or stucco, which was applied in several layers, and is fine and hard. The foundations are built on the solid rock, which is near the surface at one part of the site, and descends to 17 ft. below the surface at the lowest point. This may be one reason why the mosque has survived, practically intact, for so long. The outer wall of the main building, towards the ziyādas, is very plain, but nevertheless possesses three striking features which, in each case, recall earlier work in Mesopotamia and Persia. The pierced parapet is of bold and remarkable design (Fig. 20). Beneath this are windows with simple pointed heads, filled with pierced screens, known as *qamariyyah* or *shamsiyyah* in the East, in English most usually by the French word *claire-voie*, and made of stucco. It appears certain that these very beautiful windows cannot be ascribed to the times of Ibn Ṭulūn, but that they must be attributed to the restoration of the mosque in 1296, together with the domed building in the *ṣahn*, the fine pulpit, and various other features. They consist for the most part of geometrical patterns but also contain the fleur-de-lis. These pierced windows, in various forms, were used before the Arab conquest in Mesopotamia, Syria, and Egypt, so that the responsibility for their origin is not very clear.

Between these windows in the outer wall of Ibn Ṭulūn's mosque are niches with cusped heads, almost identical with those at Sāmarrā, and possibly derived from India in the first instance. The arcades towards the great court, within the mosque, have open niches in the spandrils, over the piers. On either side of each niche is a rosette, and a continuous band or frieze of rosettes runs round the whole court, beneath the crenellated parapet.

Within the mosque the chief feature is the *mīhrāb* or prayer-niche in the south *līwān* or sanctuary. There seems to be little doubt that the niche itself is original, and that the boldly-cut Byzantine capitals are

¹ Quoted by Lane-Poole, *Art of the Saracens*, p. 57.

² R. Williams. See Bibliography at end of chapter.

of Justinian's day or thereabouts. But Creswell is of opinion that neither the marble lining of the niche nor the mosaics of the interior of the semi-dome date from the original building, especially as the language used for the words combined in the design is of much later date. On the present outer range of piers, that is those on the north side of the sanctuary and facing the *ṣahn* or great court, are four more *mihhrābs*, so called, of very beautiful design. They consist of flat panels of ornamental stucco (not of niche-form), and may vary in date, according to various authorities, from the tenth to the thirteenth century.

The origin of the semicircular *mihhrāb* niche, with a semi-domical or pointed top, is one of the most controversial questions in the early history of Arab art. It may be ascribed to niche-forms found in the walls of Roman or Sasanid buildings, to the niches in Buddhist temples used for sacred statues—as Havell maintains,—or to the apses of Christian churches—as Rivoira states in contradicting Havell. But as the niche is a very elementary feature in architectural development, and as the early Muslims were careful not to imitate Christian or other infidel ritual for their worship, it seems more likely that they adopted the niche-form for its simplicity rather than because it was an established characteristic of a Christian church or of a Buddhist temple. None of the learned writers give the explanation that one hears from any of the attendants who take visitors round the principal mosques in Cairo, that the semicircular niche is used for the *qiblah* because all other recesses—such as window-openings—are rectangular, and thus blind men (who swarm in Egypt) can tell, by feeling their way round the mosque, when they are facing Mecca.

The sanctuary also contains a *dikkaḥ*, or tribune, the use of which has already been explained (p. 27). It is a high platform with a balustrade surrounding the top, supported on four marble columns of little interest. The top is reached by means of a narrow and very steep ladder. There is no evidence to show the date of this structure. Examples are frequently found in the larger congregational mosques, where it was difficult for those at the north end of the great court to see the ceremonies in the sanctuary unless the celebrants were raised above the general level in some such way. It is not difficult to find the origin of this feature in the basilican churches of the early Christians.

There was undoubtedly a *mimbar* or pulpit in Ibn Ṭūlūn's mosque, but the present *mimbar* dates from the restoration in 1296. There is abundant proof that the original building must have been gorgeously decorated, for even visitors from the luxurious palace of the caliphs at Baghdād were astonished and delighted when they saw it. Instead of the present bare brickwork, partly covered with peeling stucco, we must imagine a dazzling effect of white, gold, and colour, brilliant

against an Eastern background, such as one sees in the later mosque of al-Azhar (see next chapter), where the stucco remains white and perfect. Gayet¹ has given us a word-picture of the mosque as it appeared at the day of its opening, and I translate his description :

‘ It was on a Friday in Ramadan² in the year 265 (A. D. 879) that this ceremony took place. Mosaics then lined the walls up to the cornice ; a marble pavement covered the ground, and over it fine mats and carpets were laid . . . the whole Qur’ān³ was inscribed in golden letters over the arcades ; there was an open-work frieze made, according to some authors, of amber marvellously fashioned. The fountain-pavilion for ablutions had a colonnade of marble ; in the centre was a jet of water rising from a basin of Oriental alabaster ; between the columns was an open screen of gold, and from the star-spangled ceiling hung lamps and censers. In the sanctuary the *qiblah* shone with gold and colour ; the *mimbar* and *dikkah* were of rare wood. . . . In the evening, as darkness fell, great bronze lamps, hung in rows from the centre of each arch, formed lines of light ; lozenges of amber were scattered over the ground and filled the *liwāns* with perfumed clouds, so that in this twinkling of lights, this whirl of scented shadows, all hardness of form faded away ; the lines of the building became no more than a grey and mysterious fantasy, lit up with changing colours and charged with elusive perfume.’

In later days Ibn Ṭulūn’s mosque suffered many vicissitudes of fortune. The chief restoration took place in 1296, when the Sultan Lājīn, who had taken refuge here after murdering his predecessor, gave thanks to the Almighty for his preservation from justice and his subsequent promotion by restoring his place of sanctuary at a reputed cost of 20,000 *dinars*, not an excessive expenditure in view of the circumstances. His work is dated by an inscription, and includes the domed fountain in the *ṣaḥn*, the smaller minaret, the *mimbar*, the lower part of the small dome in front of the *mimbar*, the beautiful lattice-windows, one of the stucco *miḥrābs*, and the upper part of the principal minaret. The arcade north of the court is said to have been rebuilt in 1390. The upper part of the small dome mentioned above is thought by Creswell to date from the seventeenth century. Up to recent times the mosque was allowed to fall into decay, but the energetic Committee which has charge of the Arab monuments of Egypt has

¹ A. Gayet, *L’Art arabe* (Paris, 1893), pp. 52-3. and religious observance.

² *Ramadan* is the ninth month in the Moslem calendar, and is devoted to fasting

³ Corbet has demonstrated that only one-seventeenth of the Qur’ān could have been thus inscribed.

been carrying out necessary works of restoration for several years past.¹

From the date of Ibn Ṭulūn's death in 884 to the accession of the Fāṭimid caliphs in 969 there is another long break in the history of the development of Arab architecture. Minor works of restoration and alteration are to be found in Palestine and Syria, but in Cairo itself there are no buildings surviving of this period. This is remarkable in view of the fact that it was a century of almost unheard-of Oriental luxury. Ibn Ṭulūn's own son enlarged the royal palace, adorned it with sculpture and decorations as costly as they were bizarre, and laid out gardens on a scale of extraordinary magnificence. For the conventional bed of roses he substituted an air-couch, which floated on a lake of quicksilver 50 cubits square, and while he slept a blue-eyed lion guarded his slumbers. Incredible stories of menageries, stables, and kitchens survive, but their complete disappearance may be explained by the demolition of the suburb in 905, when the caliph of Baghdād succeeded in recovering his lost provinces. From that date the suburbs founded by Ibn Ṭulūn fell into decay, and Egypt resumed its dependent provincial position as before. The old mosque of 'Amr became the principal place of worship for the city. The mosques were more than places of worship :

' When a man had produced something he thought particularly good, he hastened to the mosque to share it with his critics. He was sure to find them there, doctors learned in the law, poets, commentators, seated cross-legged on their carpets in the arched porticoes round the court, expounding the refinements of style to a circle of squatting students. To this audience he would recite his latest achievement.'²

But the only mosques surviving from the pre-Fāṭimid period are those of 'Amr and Ibn Ṭulūn, the former altered out of all recognition. There was at least one more, the Jāmi' al-'Askar (the Camp mosque) built in A. D. 785-6 in the military suburb north-east of Fustāt. This was enlarged forty years later, was known to exist in the twelfth century, but has since ceased to exist. This absence of Arab monuments in Egypt and Syria prior to Ibn Ṭulūn's mosque and for a century after its completion makes it all the more an architectural landmark, standing in splendid isolation.

¹ I have reason to believe that the *Comité* will publish shortly a monograph on this mosque.

² S. Lane-Poole, *Among my Books*, p. 90.

BIBLIOGRAPHY FOR CHAPTER III

- de Beylié, Général. L'architecture des Abbassides au IX^{me} siècle (in *Revue Archéologique*). Paris, 1907.
- Corbet Bey, E. K. The life and works of Aḥmad Ibn Ṭulūn (in *Roy. Asiatic Soc. Journal*). London, 1891.
- Creswell, K. A. C. Some newly discovered Ṭulūnide ornament (in *Burlington Magazine*, November 1919). London, 1919.
- Flury, S. *Die Ornamente der Hakim- und Ashar-Moschee*. Heidelberg, 1912.
- Sāmarrā und d. Ornamentik der Moschee d. Ibn Ṭulūn (in *Der Islām*, Band IV).
- Ravaisse, P. Sur trois mihrabs en bois sculpté (in *Mémoires de l'Institut Égyptien*, vol. ii). Cairo, 1889.
- Williams, R. A Cairo mosque : how to see ' Ibn Ṭulūn '. (Three articles in *Egyptian Gazette*.) Alexandria, 1918.
- The Kibla in the mosque of Ahmed Ibn Touloun, Cairo (in *Architect*, 3rd July 1914). London, 1914.
- Yussuf Effendi Aḥmad. Monograph on mosque of Ibn Ṭulūn (in Arabic). Cairo, 1917.

See also references in general works cited on pp. 18–19.

IV

THE FĀṬIMIDS IN CAIRO (A. D. 969-1171)

THE so-called Fāṭimid style of Arab art derives its name from the Fāṭimid caliphs, whose dynasty lasted from 969 to 1171 in Cairo. The buildings remaining to us of this period, though not at all numerous, are of great importance in the story of architectural development. Before describing them in detail a brief account must be given of the chief historical events of these two centuries. In the year 969 the Normans were established in France, but neither in France nor in England had their characteristic style of architecture yet come into being. At the time of the First Crusade at the end of the following century Norman churches and castles were rising in France and in England. Sicily and the other Arab possessions in Italy had also fallen to the Norman conquerors. Thus began that curious and noteworthy fusion of Arab and Norman art which produced many buildings perplexing to architectural critics ever since. In order to determine the contribution of the Arabs to the architecture of Western Europe, and vice versa, it is important to outline the conflicting sources of architectural inspiration in Egypt and the neighbouring countries, hence this brief historical introduction.

The Fāṭimid dynasty originated in Northern Africa at the beginning of the tenth century. Its name needs some explanation. Fāṭimah, Muḥammad's daughter, married 'Alī, the prophet's first convert and staunch supporter in the vigorous years of his later life. 'Alī became in due course the fourth caliph of Islam, but was assassinated. His successors were persecuted by the Umayyads, and at last his family came to be regarded as holy martyrs. A rift in the Muslim world was thereby caused which has never since been healed. The orthodox Muslims were known as Sunnis; the family of 'Alī and Fāṭimah, i. e. the Fāṭimids, were known as Shiahs, followers of 'the Divine Right', or 'partisans'. In the closing years of the ninth century a Shiah missionary returned to his home in Barbary, and proceeded to acquire great spiritual and political influence among the Berbers. Following the example of Muḥammad himself, he raised a large army, and in 908 established a Shiah or Fāṭimid caliph on the throne of the Aghlabid governor at Qayrawān. His territory extended from the Atlantic to the borders of Egypt, and the Muslim governor of Sicily

owed him allegiance. He assumed the title of the 'Mahdī', the promised Messiah to whose coming all Muslims look forward. In 912 he sent an expedition to Egypt, and though not altogether successful, he retained possession of the fertile Fayyūm district and the western hinterland. He then harried the southern coast of France and the Italian Riviera round Genoa. He was defeated at Alexandria in 934, but always regarded Egypt as destined some day to come under his sway. This first caliph and his immediate successors appear to have been brutal and ferocious men, characterized by the qualities which aroused such hatred of the Saracens in Europe during the preaching of the first Crusades. Apparently they had no leanings towards art, literature, and the other attributes of civilization. They left buildings in Qayrawān, but not enough to enable any judgement to be made as to their architectural ability.

In the year 969 the Fāṭimid Caliph Mu'izz dispatched another expedition to Egypt under a general named Jawhar. For two years previously he had been improving the long line of communications along the Libyan coast to Alexandria, and when at last Jawhar set forth along the seashore past Sallūm and Matrūh, and other desolate spots that became familiar to many of us during the recent war, he led a well-equipped army of 100,000 mounted men. The caliph was well aware that Egypt was in no condition to resist an attack. Soldiers and civilians were discontented, and a state of anarchy prevailed. Famine and plague had recently swept like a scourge through the land. The conquest was easy, and on 5th August, after a delay of about a month outside Cairo, the invaders marched into the capital. The Caliph Mu'izz was of a stamp very different from his predecessors. A cultured man and a just ruler, his policy was lenient, and Jawhar's first act on entering Cairo was not to massacre the entire population, as was the usual practice in those days (a practice not limited to the Muslims), but to mark out a new city to the north of Fustāṭ and the later suburbs founded by Ibn Ṭūlūn and others. It was this new city that first bore the name of al-Kāhirah, by which we still know it to-day, and it was strictly speaking a great fortified palace rather than a city proper. It formed a square, about 1,200 yards each way. Yet although Jawhar laboured to produce a magnificent palace to house his sovereign, no trace remains to us of its celebrated luxury. Its site is now covered by other buildings. But the great mosque of al-Azhar that he founded in 970 still remains, much restored and altered by later builders, yet preserving many of the characteristics of the Fāṭimid style of architecture.

Mu'izz died in 975 and was succeeded by 'Azīz (975-96), who founded another great congregational mosque on the north of the new city in 990. But this mosque bears the name of Ḥākim (996-1021),

who completed it, and who lives in history as one of the most inhuman monsters of cruelty, coupled with incredible fanaticism, that the world has ever seen. His successor, az-Zāhir (1021-36), was little better, and was followed by a child, Mustanşir (1036-74), whose long reign was marked by tumult and disorder till its closing years. It is for this reason that the greater part of the eleventh century, the very period when Norman architecture sprang into being in Europe, produced no architectural examples of any importance in the great city of Cairo. But before the misfortunes of Mustanşir had fairly begun, a Persian traveller named Nāşir-i-Khusrau visited Egypt and has left us a vivid description of his impressions. The following is an extract from Professor Lane-Poole's summary¹ of this description :

... 'The royal city, Cairo itself (then called el-Ḳāhira el-Mo'izzīya), was a very large town when he saw it in 1046-9; the houses, roughly estimated at 20,000, were built chiefly of bricks, so carefully joined that they looked like squared stone, to the height of five or six storeys, and separated from other houses by well-cultivated gardens and orchards, irrigated by wells and water-wheels. The rent of a moderate-sized house was 11*D.* a month (or about £70 a year), and the landlord of the house in which the traveller lodged refused £5 a month for the top storey. All the houses in Cairo belonged to the caliph, and the rents were collected every month. The shops, which were reckoned at 20,000, were also his property, and were let at from 2*D.* to 10*D.* a month, which, even taking so low an average as 5*D.*, represents an annual income of about £650,000. The old wall of the city was no longer standing in 1046, and the second wall had not yet been begun; but the Persian traveller was struck by the high blank walls of the houses and still more of the palace, the stones of which were so closely united that they looked like a solid block. His account of the interior is disappointingly brief, but he mentions the celebrated throne-room, with its throne of gold sculptured with hunting-scenes, surrounded by a golden lattice-screen, and ascended by silver steps. He was told that the palace contained 30,000 people, including 12,000 servants, and that the guard mounted every night consisted of 1,000 horse and foot' . . . 'Nāşir-i-Khusrau found Egypt in a state of the utmost tranquillity and prosperity.'

In the turbulent period that followed, the caliph was dependent on foreign governors and foreign mercenary troops. His fortunes sank to a very low ebb. He was forced to sell nearly all his enormous treasure collected during a century of despotic affluence, including

¹ In *History of Egypt in the Middle Ages*, pp. 139-41.

a library of over 100,000 volumes. But in 1073 the tide turned. An Armenian slave named Badr al-Jamālī had risen to become the most powerful general in Syria and was then Governor of Acre or Akka. Summoned to Cairo by the caliph to save the throne, he soon restored Egypt to a condition of security, and inaugurated what we may describe as the second period of Fāṭimid architecture in the capital. The first period produced the two great mosques of al-Azhar and Ḥākim between 970 and 1013, the second the remarkable fortifications (of which a part still remains) and gates of Cairo, and the small mosque of al-Juyūshī on the top of the Muqāṭṭam hills above Cairo, founded in 1085 and so named after Badr's title of *Amīr al-juyūsh*, or commander-in-chief. The fact of his Armenian nationality has a direct bearing on his architecture, as we shall see shortly. He died in 1094, the caliph a few months later. In 1099 the Crusaders captured and sacked Jerusalem, thus putting an end for a time to Saracen rule in Palestine, and opening a new chapter in the architectural history of the Holy Land.

Before concluding this rapid survey of the history of the Fāṭimid period, something must be said of the chequered annals of Syria, Palestine, and Arabia, between 969 and 1099. When Cairo fell to the caliph Mu'izz in 969, he received tribute from the Christian king of Nubia, and was also acknowledged by the rulers of Arabia and Northern Syria, but Southern Syria and Palestine remained hostile. In 988 Damascus was captured and the Fāṭimid dominions extended to Tripoli. Antioch then belonged to the Byzantine emperor, Aleppo to hostile Muslims. But Syria and Palestine remained in a state of revolt. A rival caliph was enthroned at Ramlah (the seat of British G.H.Q. in 1918), and the Fāṭimids were defeated at Dārūm (Dayr al-Balah), just outside Gaza, the most familiar spot in all Palestine to Englishmen during 1917. In 1038, however, the Fāṭimid armies, after spreading over all Palestine and Syria, captured Aleppo and reached the Euphrates. But their triumph was short-lived and they gradually lost their new conquests. A new star was rising in the East. The Saljūq Turks subdued first Persia and then Mesopotamia. In 1071 they entered Jerusalem, in 1076 Damascus fell after a long siege. At the end of Mustanşir's reign the Fāṭimid empire consisted of little more than Egypt, Libya, and Arabia. It stands to reason, therefore, that architecture in Syria and Palestine from 969 to the coming of the Crusaders in 1099 could make little progress, for Aleppo, Damascus, Jerusalem, and Ramlah, with all the country between, were continually the objectives of contending armies. The Great Mosque of Aleppo, destroyed in 962 by Nicephorus Phocas, is stated by M. Saladin to have been rebuilt in 978, but was again burned down in 1169 and now retains little of the original structure except the minaret which is dated 1045,

and is the work of the Ḥamdānids then in possession of the city. During this period Jerusalem suffered severely from earthquakes, and contains no authenticated Fāṭimid building. The same applies to Damascus. From 1094 to 1711, the end of the Fāṭimid dynasty, the story of Fāṭimid architecture is limited to Egypt, and the buildings of Palestine no longer concern us until the days of Saladin. This period of eighty years may be described as the third or late period of Fāṭimid architecture. It was a time of constant strife between Crusaders and Muslims, a time very unfavourable for building. Yet two mosques of some interest were erected in Cairo, the 'Grey' mosque (*al-Aqmar*) in 1125 (one of the most important buildings in the history of Arab art, though of small size), and the mosque built in 1160 by Ṭalā'ī' aṣ-Ṣāliḥ, an *amīr* who was given the title of *al-Malik* ('king') for his services in restoring order in Egypt during a period of anarchy.

The first mosque erected by the Fāṭimids was al-Azhar at Cairo, founded by Jawhar in 970. As the central University of the Muslim world for centuries past, it has a considerable religious and therefore political significance even to-day, for there is no gulf between religion and politics in Islam. When any sedition occurs in Egypt, its origin is generally to be traced to some of the 11,000 students of al-Azhar, and it lies within the power of the Rector of that institution to assist or embarrass the Government. Visitors to this famous mosque are thus immediately conscious of its unique importance to Muslims. Nor can they be oblivious to the picturesqueness of the strange scene that its great *ṣahn* and sanctuary present, with thousands of turbaned students squatting on the mat-strewn floor and rocking to and fro as they recite the Qur'ān to themselves or listen to the monotonous instruction of some grey-bearded *shaykh*. It would not be too much to say that, to a European, al-Azhar offers an Oriental spectacle—unparalleled save by the Mecca pilgrimage—where one may realize at the same time the backwardness of Islam and its tremendous power. Nor does this picturesque scene lose anything by its staging. The dazzling white arcades that surround the *ṣahn*, with their quaint battlements silhouetted against the brilliant blue sky, the cluster of minarets above them—some bizarre, one at least graceful—all enhance the glow of colour presented by the many-hued robes of the students and their teachers. But al-Azhar as we see it to-day is very different from the original mosque founded by Jawhar in 970, and named by him 'al Azhar' out of compliment to the holy memory of Fāṭimah, whose surname was *Zahrā* ('the fair').

In its first state it consisted of the present *ṣahn* surrounded by the usual colonnades or porticoes, but the sanctuary only extended to half its present depth, the original south (Mecca) wall being marked to-day

by the *mihrāb* that now stands isolated in the great covered area obtained by pulling down the south wall and extending the sanctuary in order to obtain increased accommodation for students in the eighteenth century. It is generally agreed by critics that only the central portion of the sanctuary belongs to the original foundation, the interesting little dome over the entrance being ascribed by Creswell, on evidence furnished by Flury,¹ to the end of the Fāṭimite period, about 1130-49. In the Arab Museum at Cairo are to be found a carved wooden door dating from Ḥākim's restoration in 1010, and a wooden *mihrāb*² dated 1125-6, both removed there from al-Azhar.

The mosque was restored four times under the Fāṭimids, again in 1266, in 1303 (after a severe earthquake), in 1309, 1325, and 1360. The stone minaret over the north door was erected in 1415 and rebuilt in 1423-4. Qāyt-Bāy built the 'Barber's gate' in 1469 and the minaret on the west side in 1494. Ghūrī (1501-16) is responsible for the hideous twin-minaret. During the Turkish period restorations took place in 1596, 1720, 1785, and 1859. The portals in the west façade were built in 1753-4. During recent times the arches round the *ṣahn* have been opened up, and a fine stone façade towards the Sharia at-Tablitaḥ erected. Owing to this large amount of restoration and alteration, the original outline has been so much confused that no plan of the building is included in this volume. It appears in every guide-book, but does not assist one to follow the development of the mosque-plan. As the dates given to many of these Saracenic buildings and restorations may seem to the reader to be unduly arbitrary, it should be explained that almost every mosque (and even every prominent detail of a mosque) in Cairo is dated accurately by an inscription incorporated in the design by the builder. There is thus probably no architectural period where one can be more sure of one's dates.

Comparing the earliest part of the mosque of al-Azhar with that of Ibn Ṭūlūn, one finds a certain retrogression in the use of antique columns to support the arcades. Of the 380 columns used, the greater part must have been taken from Coptic churches. This fact in itself is an argument for the use of piers, but aesthetically the mixture of columns of varying sizes and of capitals of numerous types in a symmetrical building is unsatisfactory, and as the early Fāṭimids were tolerant towards the Christians one can only assume that the architect of the new mosque felt his ability to be unequal to the design of piers. This is the more remarkable since the appearance of the mosque is decidedly Persian rather than Egyptian, and it was from Persia or

¹ S. Flury, *Die Ornamente der Hakim- und Ashar-Moschee*. sculpté in *Mémoires de l'Institut égyptien*, vol. ii.

² P. Ravaisse, *Sur trois Mihrabs en bois*

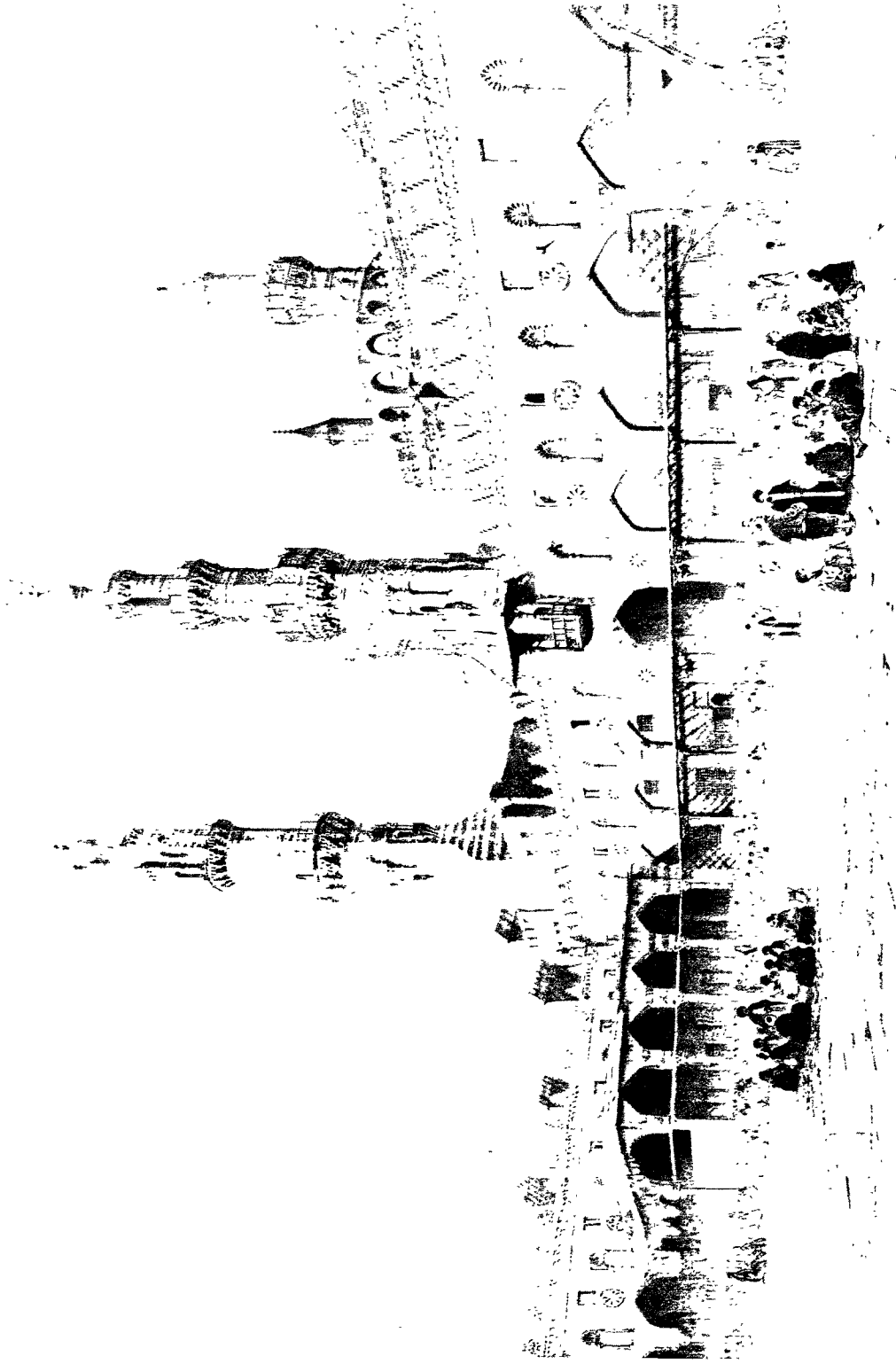


FIG. 27. CAIRO : MOSQUE OF AL-AZHAR. THE COURT



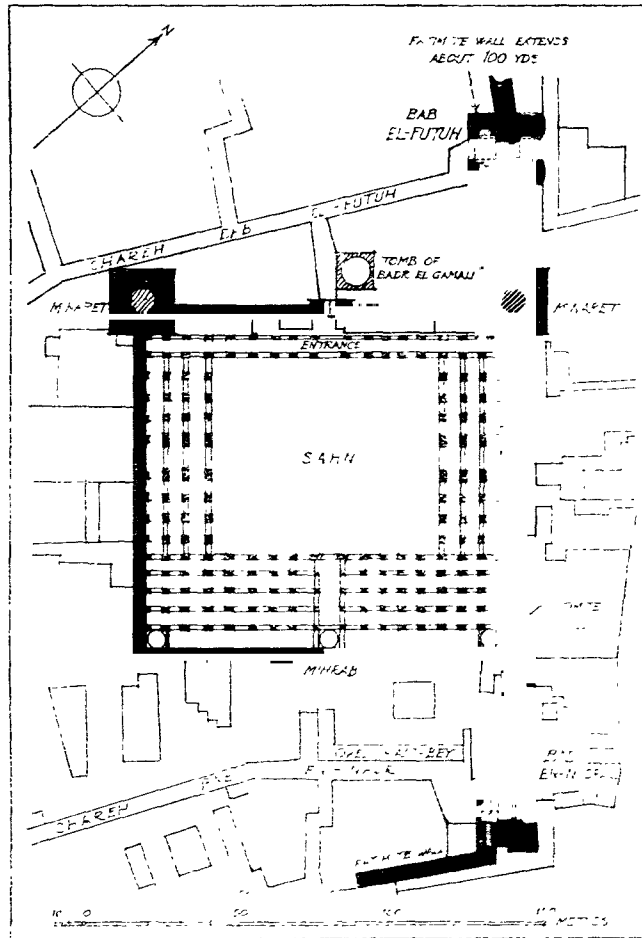
FIG. 28. CAIRO : MOSQUE OF AL-AZHAR. PRINCIPAL LIWÂN

Mesopotamia that brick piers are generally supposed to have been derived. In fact, the only novelty in construction found in this mosque is the so-called 'Persian' or 'keel' arch, which the translator of Rivoira's recent book¹ has re-christened the 'pointed mixtilinear' arch. Rivoira has examined the theory which derives this new form from Persia, but considers that no building in Persia can be dated with certainty any earlier than al-Azhar. In this conclusion, however, he is only manifesting his bias against the claims of Persia to have originated any features in Arab art, and he disagrees with critics so eminent as M. Saladin and Herz Bey. Rivoira's view appears to be that the Persian arch was actually invented by the architect of al-Azhar in Egypt, and that he evolved it from a combination of the pointed horseshoe arches of Ibn Ṭūlūn with the high imposts of the Qayrawān arcades and the so-called 'cyma reversa' arch used in India. Although it was essentially a brick construction (covered at al-Azhar with white plaster), its use was continued in Cairo for many centuries when all construction was in masonry.

There has been much speculation as to the origin of the late Fāṭimid dome over the entrance to the sanctuary, which Rivoira attributes to Sicily, while Gayet—on this occasion in a minority—does not recognize so late a date and ascribes it, like everything else in Arab art, to the genius of the Copts. So far as one can see, Rivoira's conclusion, while not definitely proved, is at least perfectly reasonable.

The great mosque of Ḥākim at Cairo was commenced in 990

¹ G. T. Rivoira, *Moslem Architecture*.



under the Caliph 'Azīz, and opened for worship in the following year before it was finished. Its building was recommenced by Ḥākim in 1003 and completed in 1012 or 1013. It was intended that this mosque, together with those of al-Azhar and of Ibn Ṭūlūn, should accommodate the whole population of Cairo on the occasion of the Friday prayers. Hence the enormous size of the courtyard. The plan closely resembles that of Ibn Ṭūlūn, with *liwānāt* on three sides, each three aisles deep, and a south *liwān* five aisles deep. At each end of the north *liwān* is a remarkable minaret. Over the *mihrāb* in the south (Mecca) *liwān* is a small dome. The whole building is in ruins. Less than half the east *liwān*, a portion of the south *liwān*, and two piers of the west *liwān* remain standing, in addition to the two minarets just mentioned. On the left of the entrance passage from the street is a small domed building, the so-called tomb of Badr al-Jamālī¹ (but as this is in the style of several centuries later, it cannot be ascribed to the famous Armenian *wazīr* whose buildings are discussed later in this chapter), placed almost centrally on the principal axis of the mosque. The great wall of the city forms the outer wall of the east (strictly speaking, the north-east) *liwān*. The parapet surrounding the *ṣahn* is of pierced brickwork, and of a design unlike any other in Cairo. The general construction closely resembles that of Ibn Ṭūlūn's mosque. The arches are of the same slightly pointed horseshoe-form, carried on square piers of brick with engaged brick columns at each angle, but the capitals of these columns consist of no more than a simple slab. The brickwork has wide joints and was formerly covered with plaster throughout. The roof was of timber joists covered with mud. Wooden tie-beams were used to strengthen the arches. Some interesting examples of Fāṭimid ornament still remain.

The principal points of interest in this mosque are the small brick dome over the *mihrāb*, and the two minarets. The former is illustrated and described by Rivoira. He has examined the structure with great care, and comes to the conclusion that although the condition of the brickwork indicates a later restoration (probably that of 1303, mentioned below), the dome retains its original form, with what he describes as 'typically Ravennate pendentives'. The minarets as we see them do not show any part of the original structure externally. The curious upper portions in brick and stucco are the work of a later builder, the Sultan Baybars al-Jāshankīr, whose restoration in 1309 has just been mentioned. His mosque in a neighbouring street has a minaret of very similar form. The lower portion of the minarets consists in each case of a massive square tower, tapering upwards, also the work of this sultan. But within these towers may still be seen the lower portion of the original minarets, built of carefully-dressed stone.

¹ No. 170 on the official plan of the Arab monuments of Cairo.



FIG. 30. CAIRO : MOSQUE OF AL-IQĀKIM. COURT AND MINARET

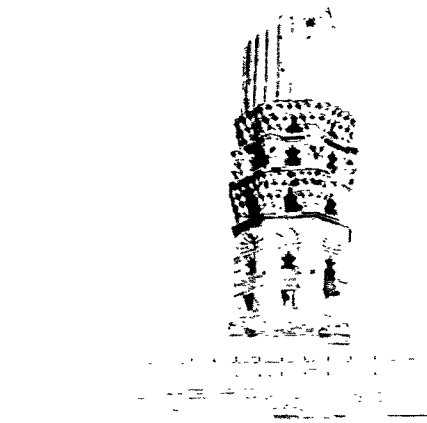


FIG. 31. CAIRO
Mosque of Al-Hākim

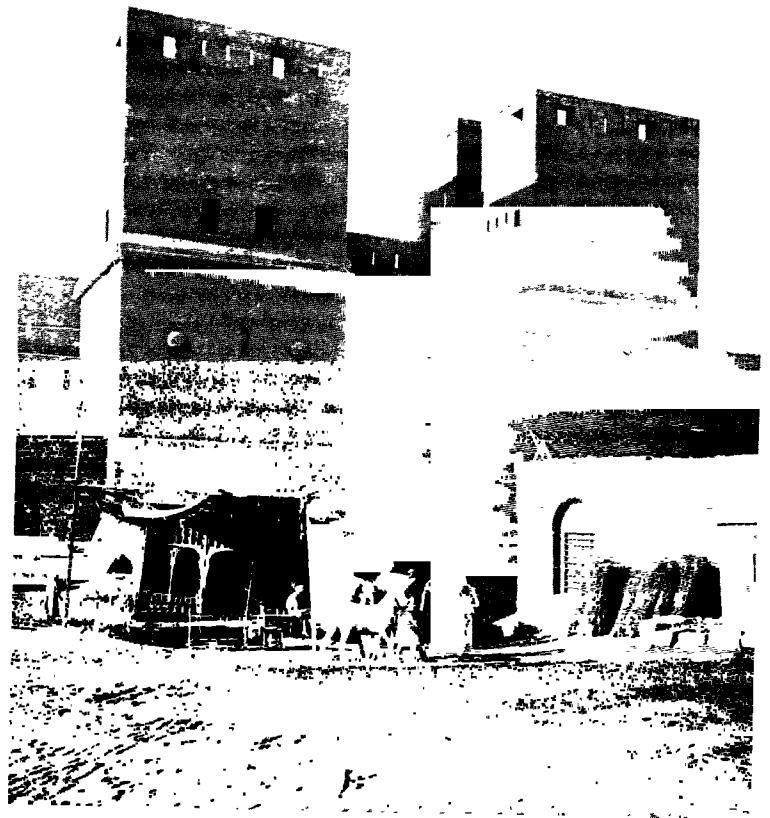


FIG. 32. CAIRO
Pāb An-Naṣr



FIG. 33. CAIRO
Bāb Zuwaylah



FIG. 34. CAIRO
Bāb Al-Futūḥ

The mosque of Ḥākim was seriously damaged by an earthquake in 1303, and was restored throughout by Baybars II. Further repairs were carried out in 1359. Although in a ruinous condition to-day, after centuries of neglect, it was used for many years as a home for the Museum of Arab Art until the present Museum in the Midan Bāb al-Khalk was erected.

To the second period of Fāṭimid architecture belongs the very interesting but dilapidated little mosque of al-Juyūshī¹ on the Muqāṭṭam Hills above Cairo (Figs. 35, 37, and 38). It is perched on the very edge of a rocky cliff that drops sheer from its walls for hundreds of feet. It is said that the Armenian amīr, Badr al-Jamālī, when he built it in 1085, so placed it that from his tomb he might be able to view the mausolea of his seven favourite wives far below in the valley. But it has an interest for the architectural student, quite apart from its romantic situation,² as the first 'tomb-mosque'. Also it is the first mosque in Cairo built of stone, not a very remarkable thing considering that the great hills surrounding it yield excellent limestone in unlimited quantities. The building is oriented north-west and south-east (see Fig. 35). The entrance is through a door under the minaret, with a vaulted well-chamber on the left and a staircase on the right as one enters. The next stage of the building is an open court with recesses on either hand. Then comes a bay of brick vaulting with brick ribs, with additional vaulted bays on either hand, thus forming what is practically a transept. Beyond lies a dome in front of the *mihrāb*, carried on three arches and on the *mihrāb* wall. The transition from the octagon of the drum to the square beneath is managed by means of pointed niche-pendentives (Fig. 38). The bricks used in construction are thin, with wide joints. The arch over the *mihrāb* resembles those of the niche-pendentives above. There is a tomb near the entrance which may possibly be that of

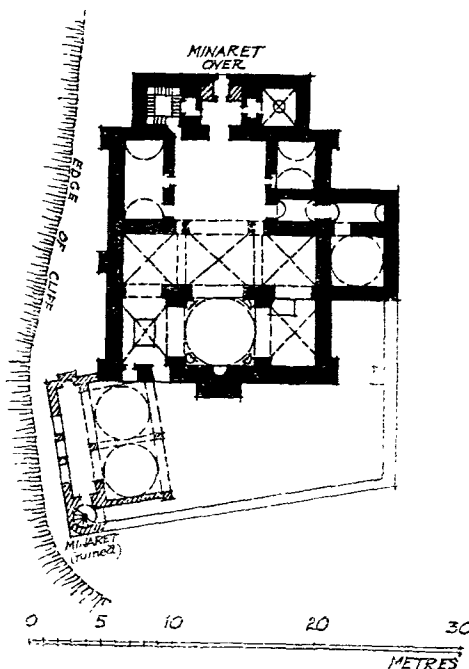


FIG. 35. CAIRO: MOSQUE OF AL-JUYŪSHĪ PLAN

¹ The plate bearing this title on p. 161 of Lane-Poole's usually accurate *Story of Cairo* is incorrectly named, and represents a later mosque on the lower slopes of the same hill

² See well-illustrated article on this building by Prof. Max van Berchem, *Une mosquée du temps des Fatimites au Caire*, in *Mémoires de l'Institut égyptien*, vol. ii.

the founder, but the prominent tomb on the east of the dome is that of some obscure saint. The coupled marbled columns on either side of the great arch into the 'transept' appear to be antique. They have very rough bases, but the clumsy capitals, typical of many Arab buildings of early date, are certainly later. Various additions to the building have been made including the two domed bays to the south and the ruined octagonal minaret adjoining. The *mihrāb* is lined with stone, and decorated with Kufic inscriptions and shell-ornament. The whole effect of the building is Persian rather than Egyptian. The most novel features of the design are the simple square minaret, in diminishing stages culminating in a small dome (the oldest minaret in Cairo retaining its primitive form), and the really remarkable plan, which is a great advance on the Mecca or congregational type exemplified in the huge square mosques of Ibn Ṭūlūn, al-Azhar, and Ḥākim. There is no doubt that the origin of this plan came from outside Egypt, either from the many Armenian churches which Badr al-Jamālī must have seen in his youth, from the vaulted buildings of the Sasanids which Rivoira so frequently derides, or possibly from Syrian types such as the praetorium of Mismiyyah and the church at Ezra. There is, however, the possibility that the ancient Egyptian *maṣṭaba* may have been a distant ancestor. The first tomb-mosque was named *turba*, but the dome eventually became so much the dominant feature of the building that *qubbah* became the popular name.

In any case we find here a new influence from outside penetrating the hitherto exclusively Arab style of Cairo, and this influence is even more apparent in the fortifications of Cairo constructed at about the same time. The Bāb an-Naṣr, the Bāb al-Futūḥ, the Bāb Zuwaylah, and a portion of the north wall of Cairo, all constructed between 1087 and 1091 under the orders of the Armenian *amīr*, still remain. According to Maqrīzī, whose statement is accepted by most competent authorities, all this work was designed by one 'John the Monk' and constructed by three architect-brothers from Edessa in Armenia. In this case, as usual, a voice crying in the wilderness ascribes the credit to a Copt, but the style of the gates bears out the general opinion that their form is essentially Byzantine, so that through Edessa and the Armenian architects it would reach Egypt by a very natural channel.

The original fortifications of the new city of al-Qāhirah, founded by Jawhar in 969, were constructed in bricks, but the later enceinte built in 1087-91 was of dressed masonry, planned on the Syrian or Byzantine system. Each of the three gates mentioned above is flanked by two towers, square in the case of the Bāb an-Naṣr, round in the other two. The walls have no battlements, but only loopholes. The illustration of the Bāb al-Futūḥ shows the joggles by which the enormous voussoirs

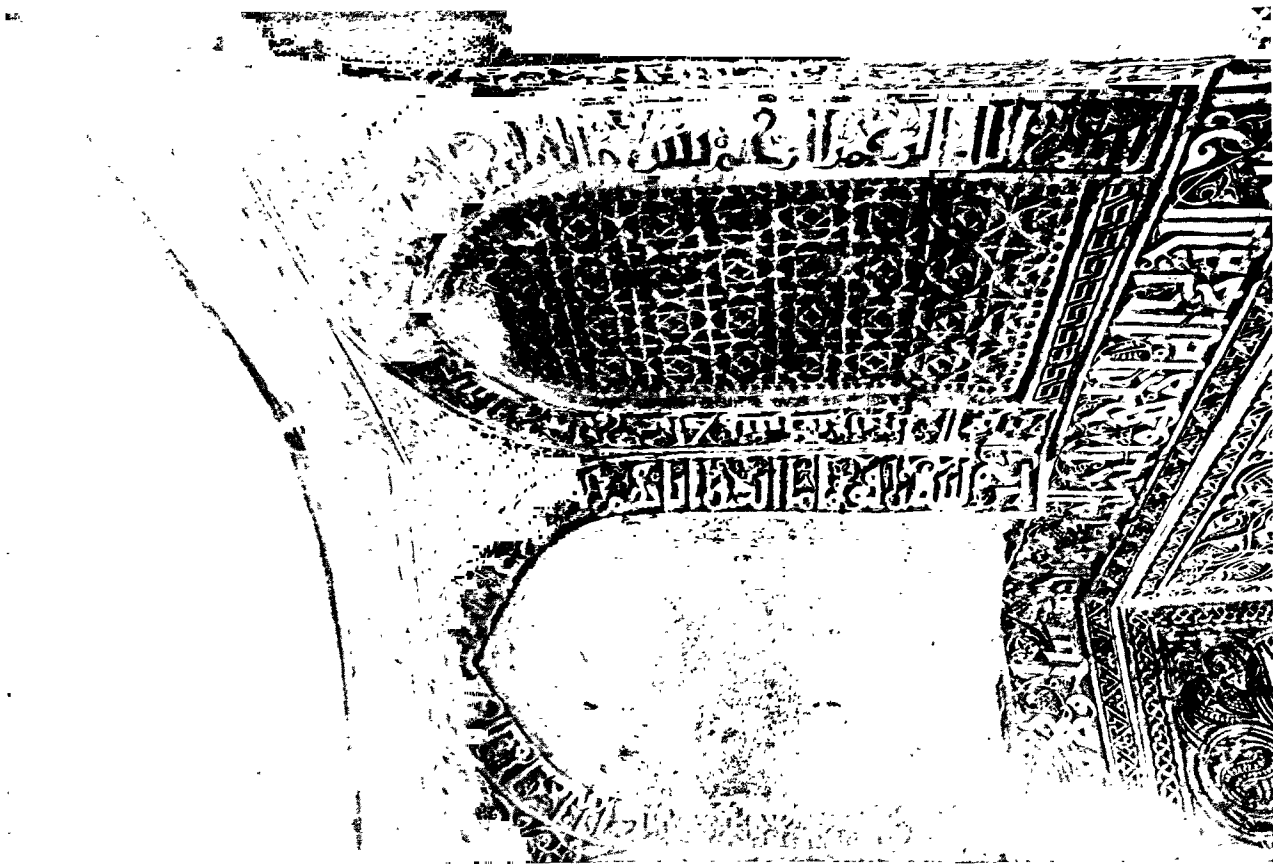


FIG. 36. CAIRO

Mosque of Al-Azhar. Fāṭimid Dome

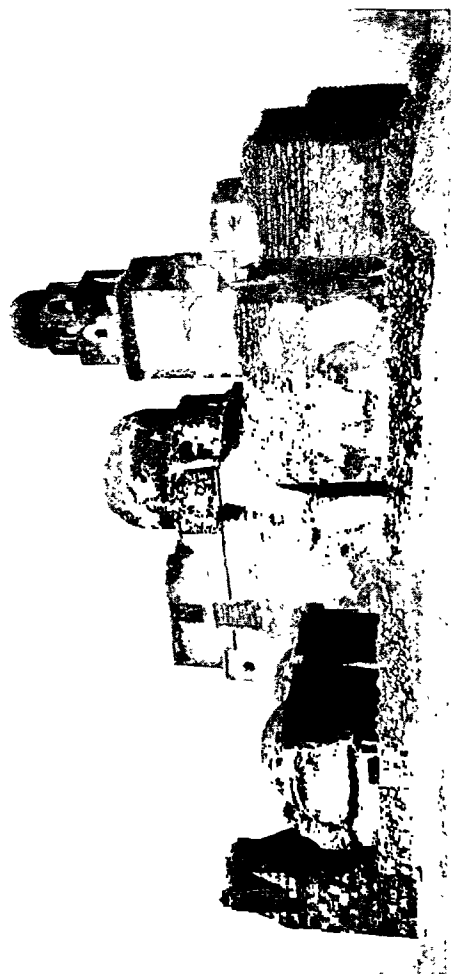


FIG. 37. CAIRO
Mosque of Al-Juyūshī

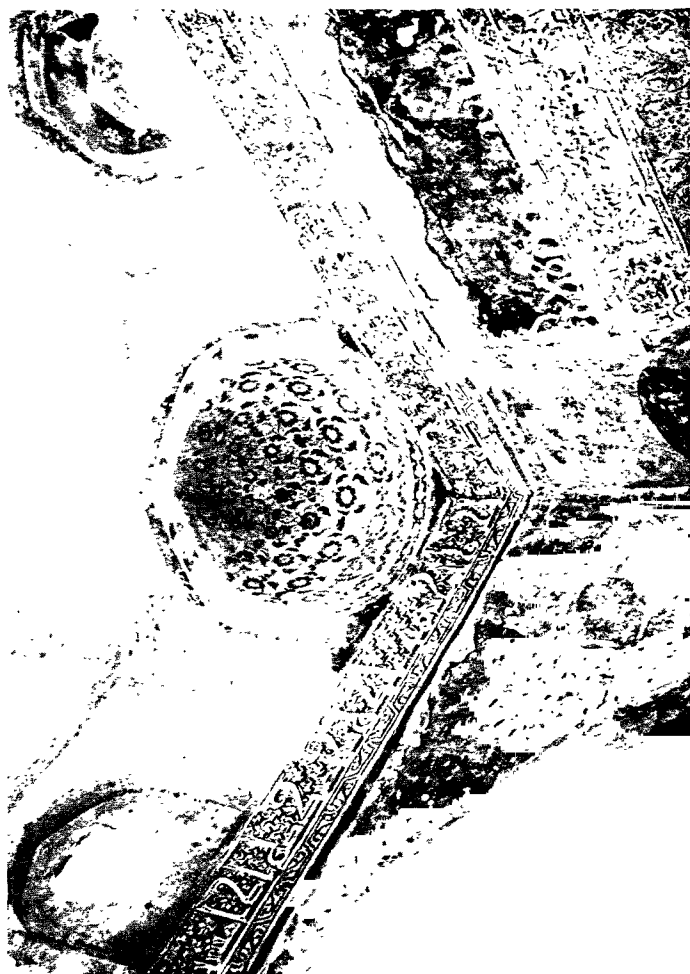


FIG. 38. CAIRO

Mosque of Al-Juyūshī. Dome over Mihrāb

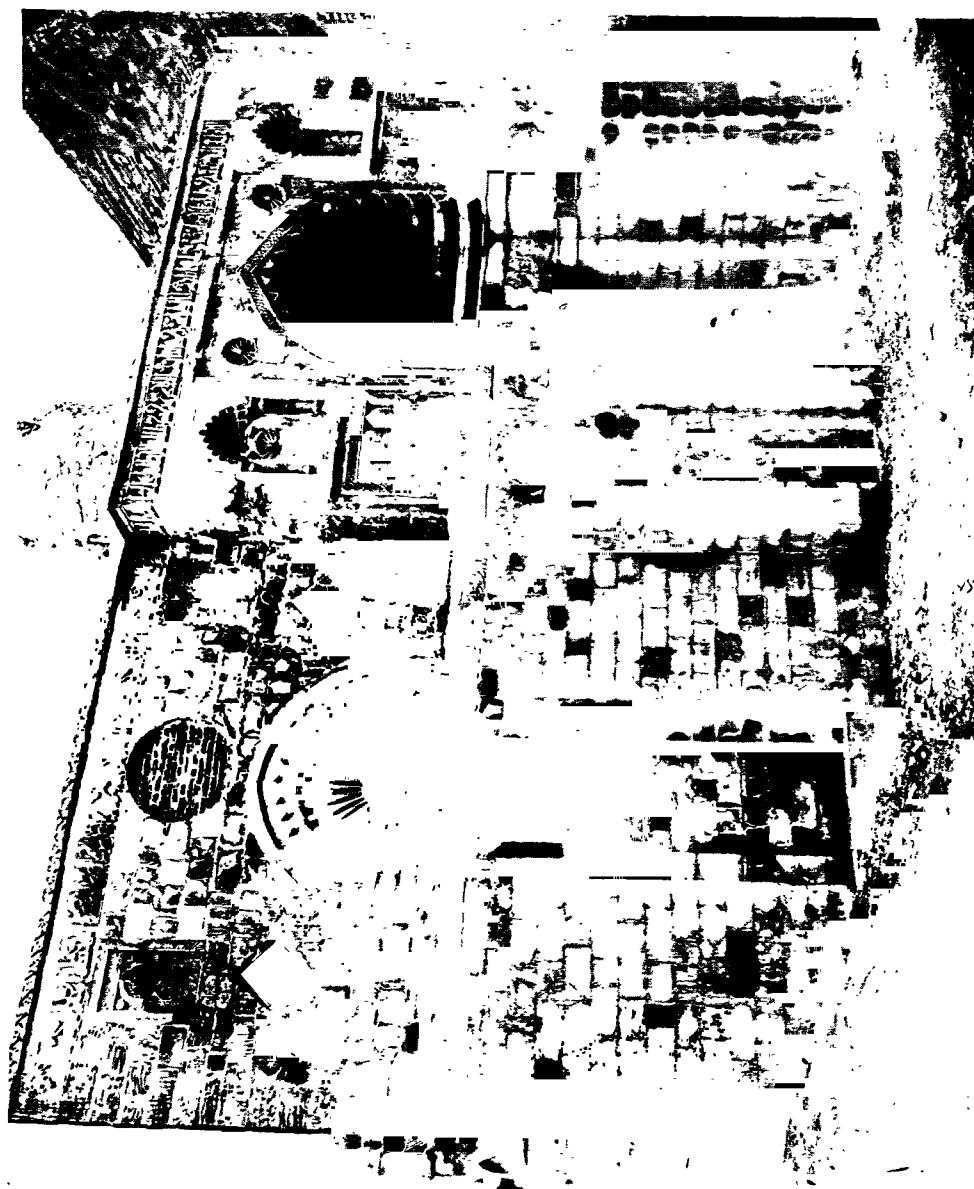


FIG. 39. CAIRO
Mosque of Al-Aqmar. Façade during restoration

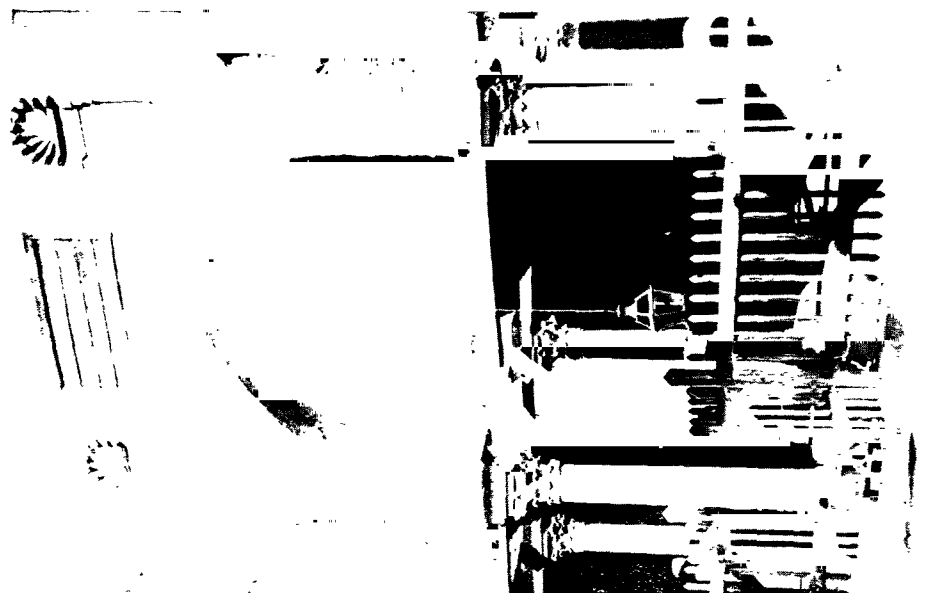


FIG. 40. CAIRO
Mosque of Ṭalāʾi ʿaṣ-ṣāliḥ. Entrance to principal Liwān

of the lintols are strengthened. Creswell has made a very careful examination of the wall, in order to ascertain how much of it can be attributed to this period.¹ He decides that it includes the portion between the Bāb an-Naṣr and the Bāb al-Futūḥ, a portion extending about 60 yards south from the former and about 100 yards west of the latter. The remainder of the existing wall was built a century later by Saladin.

The chief monument of the third or late Fāṭimid period in Cairo is the small but very important mosque of al-Aqmar ('the grey mosque') in the Sharia an-Naḥḥāsīn, built by the Amīr Ibn Baṭā'ihī in 1125. The plan (Fig. 41) is in no way remarkable. It is oriented towards Mecca, and consists of a small square *ṣahn* surrounded by a single arcade on three sides and a triple arcade on the south-east. The arcades have the usual 'Persian' arches surrounded with bands of ornamental Kufic texts, supported on marble antique columns with moulded bases and varied capitals. The imposts are strengthened with wooden tie-beams. In the spandrels of the arches are sunk

rosettes. The building was restored in 1397, when the present little minaret was erected. It has been more recently restored by the *Comité* in charge of the Arab Monuments of Egypt. The whole interest of the building, however, is concentrated on the façade (Fig. 39). Hitherto we find no instance of an ornamental treatment of the exterior of a mosque in Egypt, but here we have an elaborate design in stone giving the building quite an ecclesiastical appearance. The name of the architect is unknown, but Rivoira hazards the very possible theory that he may have been an Armenian Christian. One novel feature of the design is to be found in the ornamental joggle-joints of the voussoirs over the entrance-portal. In the fully-developed Mameluke architecture of the fifteenth century these voussoirs became one of the most striking decorative

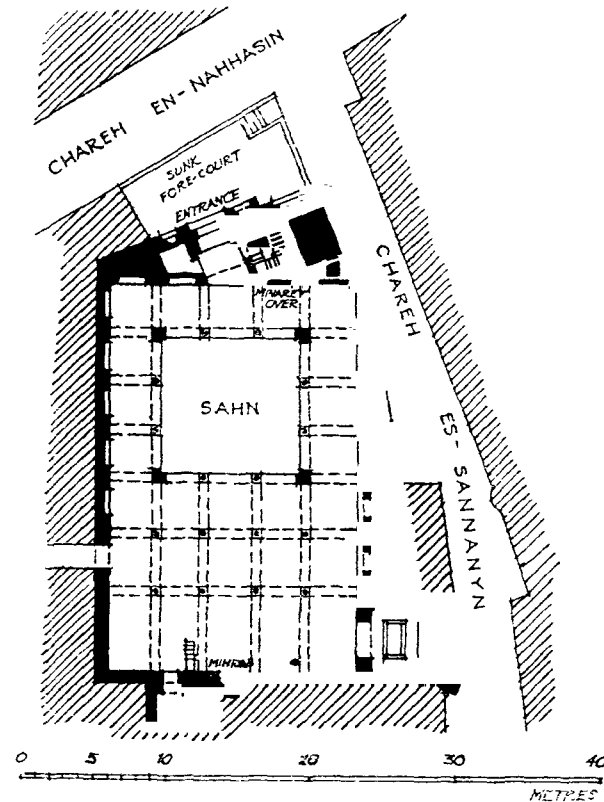


FIG. 41. CAIRO: MOSQUE OF AL-AQMAR. PLAN

¹ K. A. C. Creswell, *The Muḥammadan Monuments of Egypt*, pp. 54-6.

details, and this appears to be the earliest example. The Persian arch above is recessed and is treated in the form of a scallop shell with an ornamental roundel in the centre.

But the most important feature of this façade-design is the use, for the first time so far as is known, of the unique ornamental detail known as the 'stalactite', found in nearly all Muslim architecture after this date, and in no other architecture in the world. Briefly described, these 'stalactites' consist of small pointed niches arranged in rows, each row overhanging the one beneath. They may be used, as in the arches of this façade, simply as an ornamental frame, or as what we call in English 'corbelling', either as a continuous bracket supporting an overhanging wall or cornice, or to cover the transition of a splayed angle to a salient angle (as in this case, not very apparent in Fig. 39, but visible on the left of the picture), or in the semi-dome over a great recessed portal, or in the pendentives of a dome. It is in these two last-mentioned forms, perhaps, that they are best known, but their use for the other purposes mentioned is equally general.

There is no doubt among authorities that this is the first instance where stalactites were used, but there is a great divergence of opinion as to the origin of this feature. Prisse d'Avennes, one of the early writers on the Saracenic style, sought a prototype in the cellular structure of a pomegranate, but this view is now discredited. Nor is Fergusson's alleged prototype in India (at Old Delhi) now recognized, nor another somewhat similar but non-structural feature found in Jain temples. Spiers, in an exhaustive study of this problem,¹ thinks that the form cannot have originated in Egypt, where stone was plentiful, but rather in Persia where the traditional building material was brick. (Considering that al-Aqmar occurs in the first group of stone buildings found in Cairo, this seems a rash conclusion.) Spiers then cites a pendentive at Sarvistān, which he dates A. D. 350, formed of a series of concentric arches, then a late thirteenth-century mosque at Tabrīz, where the stalactites are fully formed, and traces a connexion between them. He considers that this form was then copied in stone for purely decorative purposes, and instances a parallel case in English Gothic fan-vaulting. From Sarvistān he would have us proceed to Baghdād, where he describes two buildings alleged to date from the time of Hārūn ar-Rashīd, thence to La Zisa at Palermo which he dates early in the eleventh century. Here he finds the first stalactite vault. Rivoira, whose study of the origins of Arab architecture ends at al-Aqmar, demolishes all Spiers's theories in detail by denying his dates in each case, both in regard to Baghdād and Palermo, but is not very helpful in indicating the origin of this much discussed feature. He considers

¹ R. Phené Spiers, 'Honeycomb (Stalactite) Vaulting', in *Architecture East and West* (pp. 44-56).

that the first authentic use of stalactites is to be found at the cathedral of Ani in Armenia, only a few years earlier than al-Aqmar, and finally concludes that 'it originated in the use of niches with cusped arches'. Having gone so far, he might have pursued the question to its ultimate source, and admitted, however reluctantly, that cusped niches originated in Mesopotamia.

The last Fāṭimid mosque of any importance in Cairo was built in 1160 by the *wazīr* Ṭalā'ī as-Ṣāliḥ, and restored after the earthquake of 1302 (Fig. 40).¹ In plan it resembles almost exactly the mosque of al-Aqmar, though the *ṣahn* is rather deeper from north to south. The same type of arcade, with Persian arches, marble columns, and wooden ties, is used. But it is partly ruined and there is no façade visible. Such ornamental details as remain in the Kufic bands of stucco round the arches, and on the wooden tie-beams, are delicate in character and very characteristic of the period. The small minaret is of no particular interest.

At Qūṣ, in Upper Egypt, is the mosque of al-ʿĀmirī, built by the same *wazīr*, containing a fine Fāṭimid *mihrāb*, which is wrongly described under Fig. 69 in M. Saladin's *Manuel d'art musulman*. For the minor monuments of Cairo built during this period the reader should consult Creswell's work, already mentioned. For reasons already stated in the first part of this article, there are practically no examples of the period outside Cairo, except the minaret (A.D. 1090) of the Great Mosque at Aleppo, built under the Ḥamdānids. The walls of Aleppo were, however, restored by Ḥākim in 1016-23 and a small portion of his work, including part of the Antioch Gate (Bāb Antākiya) remains. The ancient Citadel of Aleppo was also extensively restored by Nūr ad-Dīn in 1169-70, and the fine wooden *mihrāb* in the Citadel, worthy of comparison with the three splendid examples in the Arab Museum at Cairo, is dated 1167-8. The beautiful wooden *mimbar* now in the mosque of al-Aqṣā at Jerusalem (p. 38) was also designed for this building. Nūr ad-Dīn's madrasahs in Aleppo, though of the Fāṭimid period, are, for reasons of convenience in description, mentioned in the next chapter.

BIBLIOGRAPHY FOR CHAPTER IV

- Van Berchem, M. Une mosquée du temps des Fatimites au Caire (*Mémoires de l'Institut égyptien*, vol. ii). Cairo, 1889.
 Flury, S. *Die Ornamente der Hakim- und Ashar-Moschee*. Heidelberg, 1912.
 Kay, H. C. Al Kahirah and its Gates (*Roy. Asiatic Soc. Journal*). London, 1886.
 Quatremère de Quincy. *Mémoire sur l'histoire des Caliphes fatimites*.
 Ravaisse, P. Sur trois mihrabs en bois sculpté (*Mémoires de l'Institut égyptien*, vol. ii). Cairo, 1889.
 Wüstenfeld, F. *Geschichte d. Fatimiden-Chalifen n. arab. Quellen*. Göttingen, 1881.
 Also references in 'general works cited on pp. 18-19.

¹ Described and illustrated in Mrs. Devonshire's *Some Cairo Mosques*, pp. 1-10.

THE ARCHITECTURE OF SALADIN AND THE INFLUENCE OF THE CRUSADES (A. D. 1171-1250)

IT would be interesting to trace the influence of the greatest soldiers of history upon the architecture of their respective periods. In some cases it would be very slight, in others considerable. Among the ancient despots of the East, it was common for the king to combine the functions of commander-in-chief and master-builder of the state. Napoleon found time to interest himself in the façade of Milan Cathedral, in the re-planning and embellishment of Paris, and in the monumental work, prepared under his inspiration, describing the ancient buildings of Egypt. Conversely, Lord Kitchener as a very young man attracted attention by his archaeological work in Palestine, long before he conquered the Sudan, ruled Egypt, or raised the army that finally won the recent war.

Saladin, or to give him his full name and titles, al-Malik an-Nāṣir Abu'l Muzaffar Ṣalāh ad-dunyā wa'd-dīn Yūsuf Ibn Ayyūb, as the gentle knight *sans peur et sans reproche* of the Crusading story, has been popularized by Sir Walter Scott in *The Talisman*, and lives in more serious history as a great soldier without a serious stain on his reputation at a time when cruelty and treachery characterized the records of nearly all his contemporaries, especially the majority of the leading Crusaders themselves. He was born in 1137 or 1138 at Takrīt in Mesopotamia, one of the many towns mentioned in this chapter that have become familiar to Englishmen during the past few years. His father's name, Ayyūb (Job), explains the name of the Ayyūbid dynasty in Egypt of which Saladin was the founder, and the 'Ayyūbid' architecture of Egypt and Palestine between 1171 and 1250 with which this chapter is concerned. By birth Ayyūb was a Kurd from Northern Armenia. His son is therefore one more example of the energy and ability of the various foreign rulers of Egypt, like Ibn Ṭūlūn in the ninth century, and the later mameluke sultans who made Cairo one of the most beautiful cities in the world. At the time of Saladin's birth the Turks had already spread over most of the eastern part of the old Baghdād caliphate, that famous dominion being reduced to a small part of Mesopotamia. Their first or Saljūq empire had included most of Syria in the latter half of the eleventh century, but towards the end of

that century it broke up, thus contributing largely to the initial successes of the Crusaders who captured Jerusalem in 1099 and established over most of Palestine a Latin kingdom which lasted nearly ninety years. The Saljūq Turks were soldiers rather than artists, but they were by no means indifferent to culture, and provided an excellent system of education in their numerous colleges.

While the Crusaders as they settled in Palestine made Oriental marriages and contracted Oriental ways, or at any rate all the less desirable of Oriental ways, the *Atabeg* or ruler of Mosul was becoming a powerful menace to them, and in 1128 established his power at Aleppo. A few years later he appointed Ayyūb governor of Baalbek, and in 1154 Nūr ad-Dīn, king of Aleppo and son of the *Atabeg* of Mosul, entered Damascus. At his court there Saladin spent the next ten years of his life. He appears to have been a retiring youth, devoted to books and religion, and content to spend most of his time in the famous *madrasahs* (colleges) of Damascus. From 1163 to 1171 there was a constant struggle between the Turks and the Crusaders for the possession of Egypt, then tottering helplessly to its fall under the feeble rule of the later Fāṭimids. The Egyptians formed secret alliances with each of the invaders from time to time, and in these transactions the Crusaders appear at their worst. Saladin now arrives on the scene as a studious and self-effacing officer on the staff of his uncle, the commander of the Turkish army in Egypt. In 1167 he was appointed governor of the fortified city of Alexandria, whose Arab walls and towers now no longer exist, but are finely illustrated in Jomard's *Description de l'Égypte* as they appeared in 1798. A truce having been arranged, he was then entertained at the court of the Crusading king. A treacherous invasion of Egypt by King Amalric of Jerusalem again in the following year led to a frantic appeal to Nūr ad-Dīn for intervention from the Fāṭimid caliph. Saladin was sent with the Turkish army, under his uncle who then became *wazīr*, or chancellor of Egypt. In 1169 Saladin, though a young man, was chosen to succeed him, and two years later—on the death of the caliph—he ascended the throne of Egypt himself, acknowledging the suzerainty, only so far as was necessary, of Nūr ad-Dīn. He had fought again with the Crusaders at Damietta, Gaza, and Dayr al-Balah, during the two years that he was *wazīr*, and he also was forced to attack the Sudanese troops of the Egyptian army who had risen against him.

But from 1171 to 1182 he ruled and resided in Cairo, leaving his mark on the city, according to Professor Lane-Poole, more strongly than any other of its numerous rulers. Cairo at that time did not extend over the modern European quarters, these being under water, as well as the modern suburb of Būlāq. The strange hills on the south-

west of the city that so perplex a modern visitor, consisting as they do for the most part of rubbish, had just been formed, for the suburb of Fustāt had been burned down lest it should afford shelter to the Crusaders. Saladin did not occupy the famous palace of the Fāṭimid caliphs upon his accession, but allowed it to fall into decay, while he himself preferred simpler quarters. This palace was built in two halves, separated by a square then known as *Bayn al-Qaṣrayn* ('between the palaces') and now forming part of the Shari'a en-Nahḥāsīn, wherein lie several of the finest mosques of Cairo. In one of the palaces were all the state-apartments and offices of the court, in the other and smaller one the private rooms and *ḥarīm* of the monarch. The square was large enough to form a parade-ground for 10,000 troops. Beneath it ran a subway along which the caliph could ride on his mule to his private apartments. The incredible luxury of these palaces is recounted by William of Tyre,¹ who describes the embassy of the Crusaders to Cairo in 1167. Among other features of the buildings is mentioned an *oubliette*.

Though one of the most important innovations effected by Saladin in Cairo was the substitution of the orthodox religion for the heretical Shiah doctrines of the Fāṭimids, the most important to us is the building of the great Citadel that still dominates the town. Its original strength vanished with the discovery of gunpowder and long-range artillery, but it commanded the city for several centuries, and was itself immune from attack from the great cliffs of the Muqāṭṭam Hills that rose high above it not very far away. It was commenced about 1176, and in spite of considerable later alterations and additions, preserves on the side facing the Muqāṭṭam Hills very much the appearance that it must have had in Saladin's day (Fig. 80). At the same time he began to extend the city walls, intending to connect the Fāṭimid portion with the *enceinte* of the Citadel. However, he died before this work was completed. There is no doubt that he owed something of his knowledge of fortification to the Norman castles that had by this time sprung up all over Palestine. Besides this military architecture, he introduced into the city two new types of building, the *māristān* or hospital, and the *madrasah* or school-mosque. The latter form is of the utmost importance to the student of Saracenic architecture, for it was the origin of the *madrasah* plan that produced in later years the finest Arab monuments of Cairo, if not indeed of all the Muslim world. The word *madrasah* means a college, and it was part of Saladin's policy to suppress the Shiah heresy of the Fāṭimids by systematic teaching of the orthodox faith. The four schools or rites (*mazhab*) of the Muslim

¹ Quoted in Lane-Poole's *Cairo*, pp. 130-2; see also M. Ravaisse in *Mémoires de la Mission archéologique française au Caire*, tom. i-iii, for conjectural plans of these buildings.

faith were the Mālikite, Shāfi'ite, Hanafite, and Hanbalite. The first *madrasah* was founded in Khurasan early in the fourth century of the Hījah. *Madrasahs* had been built many years previously by Nūr ad-Dīn at Damascus and Aleppo. At Aleppo the first *madrasah* was that of al-Zajjājiyyah (1116-24), now destroyed. The ancient cathedral church of Aleppo was transformed into a mosque in 1123-4 and became the *Madrasah al-Halāwiyyah* in 1148-9. It is one of the most interesting buildings in the city. The *Madrasah ash-Shu'aybiyyah*, built by Nūr ad-Dīn in 1150-1, has rich ornament and Kufic inscriptions. In these buildings, where Saladin himself had sat at the feet of the doctors, the plan may have been dictated by common sense, or may have been copied from Mesopotamian or Christian prototypes. The typical *madrasah* plan, of which the most splendid example is the mosque of Sultan Ḥasan at Cairo, consists of a square central space or *ṣahn*, open to the sky, with a large covered recess or *liwān*, spanned by one huge pointed arch (*'aqd*), on each of the four sides. In each recess is taught one of the four doctrines. The plan thus obtained is a simple Greek cross, a form that was evolved in East and West in very early times (as the frantic partisans of the two theories of the origin of Saracenic art have plainly shown), or may very conceivably have been invented by Nūr ad-Dīn himself. To those who have no pet theory to advance, these explanations are sufficient, and an architect should be more concerned with the development of this embryo plan into the magnificent *madrasah* mosques of the fourteenth and fifteenth century in Cairo.¹ The first *madrasah* in Cairo was built near the present tomb-mosque of Imām ash-Shāfi'ī south of the city by Saladin in 1176, but has long ceased to exist even as a ruin. In 1183 it was described by Ibn Jubayr² as so surrounded by buildings as to resemble 'a township with its dependencies. Over against it is the *ḥammām* [bath] with all other needful offices, and the building and additions are still going on at a cost not to be counted. The Shaykh . . . himself oversees it, being *imām* of the mosque, a pious learned man'. Another *madrasah* was built by Saladin in Cairo adjoining the mosque most sacred to the Fātimids, where the head of the martyr Ḥusayn was buried, and three more separate colleges for the various rites in different parts of the city. After the middle of the thirteenth century, when Saladin had overthrown the heretics and its original purpose had thus ceased to exist, the *madrasah* became a mosque and was furnished with a minaret. The external angles between the arms of the Greek-cross plan were filled with rooms for the officials and servants of the institution.

¹ For further information as to the *madrasah* see Prof. van Berchem, *Corpus inscriptionum arabicarum*, p. 251 *et passim*.

² Quoted in Lane-Poole, *Cairo*, p. 184.

The following is Ibn Jubayr's description¹ of the first hospital in Cairo, founded by Saladin. Though of little importance to the architectural student it throws some light on the arrangement of the Arab *māristān*.

'He has appointed here an administrator, a man of knowledge, in whose charge a provision of drugs has been placed, with power to compound potions with these according to diverse recipes, and to prescribe them. In the chambers of this palace couches have been placed, which the sick folk make use of as beds, these being fully provided with bed-clothes, and the administrator has under him servants who are charged with the duty of inquiring into the condition of the sick folk morning and evening, and these last receive food and medicines according as their state requires. Opposite this hospital is another, separate therefrom, for women who are sick, and they also have persons who attend on them: while adjacent to these two hospitals is another building with a spacious court, in which are chambers with iron gratings, which serve also for the confinement of those who are mad, and these also are visited daily by persons who examine their condition and supply them with what is needful to ameliorate the same. The Sultan himself inspects the state of these various institutions, investigating everything and asking questions, verifying the statements with care and trouble even to the uttermost; and in Miṣr [Cairo] also there is another hospital, exactly after the pattern of the one just described.'²

Unfortunately no mosque remains to us of Saladin's time, so that here there is a brief hiatus in the main thread of development of Saracenic art. He restored or rebuilt a large part of the ancient Mosque of 'Amr³ at Fustāt near Cairo, but that much-altered building has had so chequered a career that it is impossible to ascribe the various portions to their respective authors. He carried out other work, such as the great Dyke of Giza, that is military engineering rather than architecture, and even his architectural masterpiece in Cairo, the Citadel (or, as the Arabs call it, 'the Castle of the Mountain', *Qal'at al-Jabal*), only affects our principal theme—that is, the development of Saracenic art—in matters of detail.

It was his intention so to complete the fortifications constructed by Badr al-Jamālī nearly a century before as to render Cairo safe from attack. It is impossible to understand his scheme without recalling

¹ Quoted in Lane-Poole's *Cairo*, p. 186.

² This account should be read in connexion with the reference to the later *Māristān* of

Qalāwūn, p. 99, and Fig. 60 in this book.

³ See pp. 45-6 in this book.



FIG. 42. ALEPPO: THE CITADEL



FIG. 43. JERUSALEM. ST. STEPHEN'S GATE



FIG. 44. JERUSALEM: A STREET FOUNTAIN

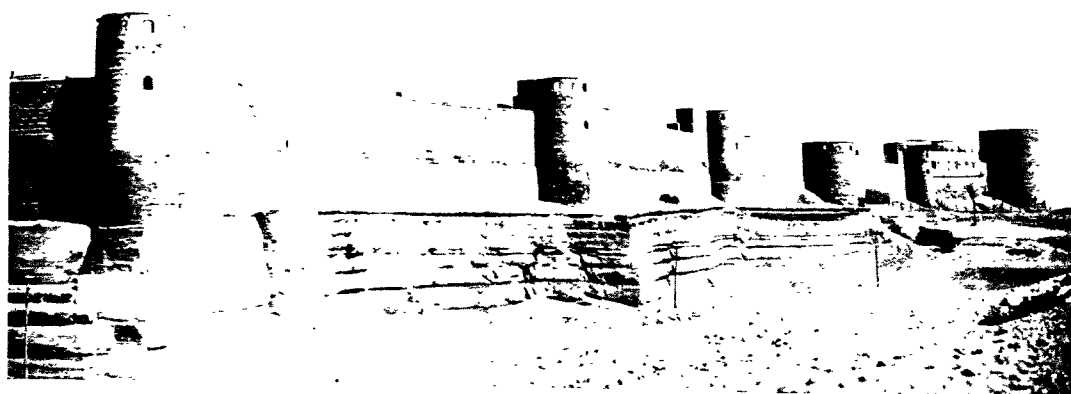


FIG. 45. CAIRO: THE CITADEL



FIG. 46. GAZA : INTERIOR OF GREAT MOSQUE
Formerly Crusader Church of St. John



FIG. 47. JERUSALEM
Chapel of the Virgin's Tomb



FIG. 48. LUDD : CHURCH OF ST. GEORGE



FIG. 49. GAZA : THE GREAT MOSQUE
Crusader Doorway

the very different aspect of the city in those days from its present topography.¹ The Nile then covered the modern suburb of Būlāq, as well as the present Ismailia quarter, and its eastern shore lay somewhere about the position of the modern railway-station. There was a quay or small port at about this point, and here also was the western end of the new wall—a tower named ‘Qal‘at al-Maks’. Thence the north wall, still to be seen in part by a persevering student, was continued to join the Fāṭimid wall near the Sharia Khalīj al-Maṣrī. The east wall with its fortifications, including the so-called Burj az-Zafar, is partly buried beneath the ‘rubbish-hills’ already mentioned, but runs southwards towards the Citadel, and is chiefly the work of Saladin. Finally, there is the wall of Fuṣṭāṭ on the south. The position and design of these walls is a matter for the military engineer and the archaeologist rather than for the architect. The whole question has been recently and ably discussed by Creswell.² But it is to be noted that the science of masonry was now developing rapidly, thanks no doubt to intercourse with the Crusaders, who brought with them from France a knowledge of stereotomy³ that found a fertile soil in a city like Cairo, where an unlimited quantity of fine limestone was to be had for the carting. So in these walls we find good ashlar masonry or rusticated blocks with drafted margins. It is thus the more to be regretted that in constructing the Citadel Saladin’s builders used, as a quarry, the small pyramid at Giza seven miles away, rather than the natural quarry which lay almost at their feet. The great walls of the Citadel shown on Fig. 45, with the fine round towers, are of this period, but perhaps the most remarkable feature of the whole fortress is the so-called ‘Joseph’s Well’, descending 290 feet into the earth to water-level. Steps wind spirally downwards to a platform, about half-way down, where were stationed the oxen that worked the slowly-moving *sāqiya* that raised the water from below, as water has been raised from time immemorial in Egypt and is still raised to-day.⁴ But obviously ‘Joseph’s Well’ does not preserve the name of Pharaoh’s *wazīr*. It is one of the names (*Yūsuf* in Arabic) of Saladin, and the *Bahr Yūsuf* (a stream familiar now to English soldiers), connecting the Nile with the Fayyūm, is another case in point, in spite of popular legend.⁵ The architectural features of this citadel admittedly show the influence of the Crusaders, and it is significant that much of the construction was carried out by Christian prisoners of war.

¹ See the excellent map in Lane-Poole’s *Egypt in the Middle Ages*.

² K. A. C. Creswell, *Muhammadan Monuments of Egypt*.

³ See Clermont-Ganneau, *Archaeological Researches in Palestine*, 1896.

⁴ An excellent illustration of this well is given in Jomard’s *Description de l’Égypte* (Volume *État moderne*).

⁵ See my book, *Through Egypt in War-time*, pp. 45–7.

During the eleven years that he ruled as Sultan in Cairo, Saladin conquered the Sudan, Arabia, and the Libyan coast as far as Tripoli. But his chief fighting was with the Crusaders in Syria and Palestine. The struggle was a long one, and his fortunes varied. In succession he occupied Damascus, Hamā, Aleppo, and then assumed the title of King of Syria. In 1182 he left Cairo for the remainder of his life, and made Damascus his head-quarters. Finally, after besieging the great fortress of Kerak and defeating the Crusaders near the Sea of Galilee, he captured Jerusalem in 1187, and thus put an end to the Latin kingdom that had ruled Palestine for eighty-eight years. The remaining six years of his life were not all peaceful, however, for it was not until after the famous siege of Acre, and the battles of Arsūf and Jaffa, that Saladin concluded a truce with the Crusaders in 1192, leaving them only the coastal strip of territory from Tyre to Jaffa. After making a last tour of his new kingdom to see that its fortifications were all in order and his new subjects contented, he returned to Damascus, only to die there in 1193, in the fifty-fifth year of his age. He was buried near the great Umayyad Mosque, in the little *qubbah* or domed tomb-chamber that still bears his name.

Before describing the architectural work of Saladin in Palestine and Syria, chiefly in Jerusalem and Damascus, it is necessary to review briefly the buildings of the Crusaders, erected during their tenure of the Holy Land. These may be divided into two main groups, fortresses and churches, for the few bridges and minor buildings that do not fall within either of these categories may for the purpose of this book be neglected. Mention must be made, however, of the stone-vaulted bazaar-streets of Jerusalem, always among its most picturesque features, and in part at least due to the Crusaders. The citadel, walls, and gates of Jerusalem have formed the subject of controversy for years; but the greater part of them as they appear to-day, as well as the beautiful street-fountains, date from the days of Sulayman the Magnificent (middle sixteenth century), that is from the post-Saracenic period after the Turkish conquest in 1517. This is the more remarkable in view of their close resemblance to Crusader-architecture, and shows the power of Crusader influence (Fig. 43).

The 'strong-points' of Palestine were fortified into great castles with French names now replaced in Arabic, such as 'Château Neuf' (Qal'at al-Huṣṣn), 'Banias' (Qal'ah Ṣubaybah), 'Belfort' (Qal'at ash-Shaqīf), 'Toron' (Qal'ah Tibnīn), 'Montfort' (Qal'at al-Qurayn), and possibly 'Mirabel' (Ra's al-'Ayn). Of these Toron was perhaps the finest. The fortress of Athlith on the coast south of Haifa, built by the Templars in 1218, is now partly ruined. The remains of many fortified towns, e. g. Arsūf, Caesarea, Ascalon, Bayt Jabrīn, &c., are

also to be seen.¹ All these buildings prove that the Crusaders brought with them from Normandy and Italy to Palestine a wide knowledge of military science, as well as of scientific masonry, and that the Saracens in later years made abundant use of this knowledge.

The churches of the Crusaders in Palestine are also very numerous. Outside Jerusalem itself, the best-preserved examples are at Ramlah (now known as the Great Mosque), Ludd, Nablus, Samaria, Qaryat al-'Inab, Hebron (now incorporated in the Great Mosque), and Gaza (now converted into the Great Mosque). Besides these there are numerous small churches, as at Nabī Shamwīl and at Bīrah, as well as a fine church at Tortosa in Syria. With the exception of the last, all the examples mentioned became familiar to English soldiers during the recent war, and, partly for this reason, partly because it is one of the least damaged of any of the buildings mentioned above, the Great Mosque of Gaza may be taken as the typical church of the Crusaders for the purposes of this chapter. Hundreds of thousands of Englishmen in 1917 watched shells pouring on to the surrounding city for eight months, but the sanctity of the mosque was respected, and not until it was established beyond doubt that it was used as an ammunition dump did the monitors and howitzers turn their fire on to the building. It has suffered severely, and now one climbs over heaps of stone fallen from the groined vaulting. But the battered interior, its marble shafts torn by shell-splinters, still retains much of its ancient glory, and the exquisite west door still remains just as it was when 'Lieut. Kitchener' photographed it in 1874 or thereabouts. The illustrations on Figs. 46

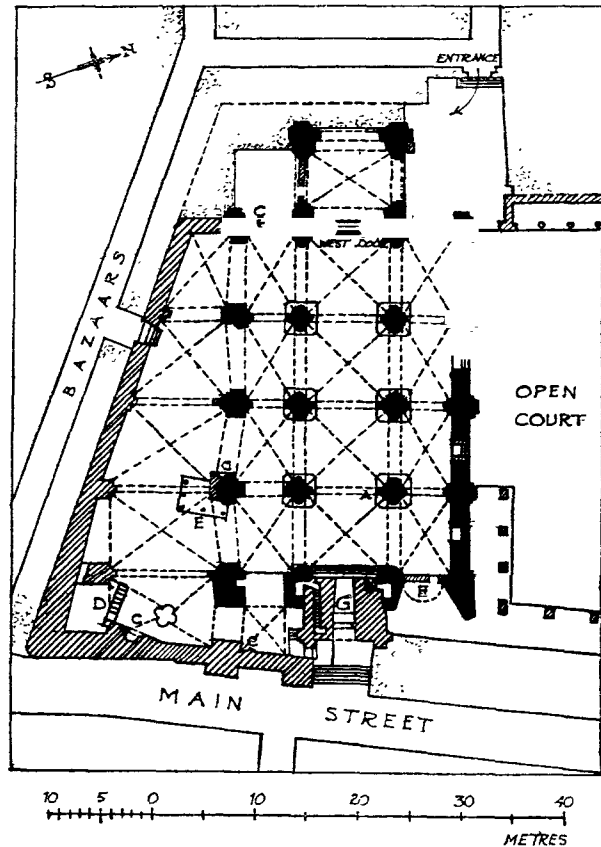


FIG. 50. GAZA: THE CHURCH OF ST. JOHN (NOW THE GREAT MOSQUE). AFTER CLERMONT-GANNEAU. C=MIHRĀBS, E=DIKKAH, G=MINARET, D=MIMBAR

¹ For illustrations of the chief castles of the Crusaders see the various volumes of the *Survey of Palestine*, prepared by Lt. C. R. Conder and Lt. (later Lord) Kitchener.

and 49 are from his negatives, and show the building in use as a mosque, as it has been used for seven centuries. A study of the architectural detail reveals a close similarity with the Norman-Sicilian style then prevailing in Sicily and certain towns of the mainland, itself derived from a fusion of Northern Gothic art in its infancy with the work of the Saracen craftsmen of Sicily. The arch used by the Crusaders in

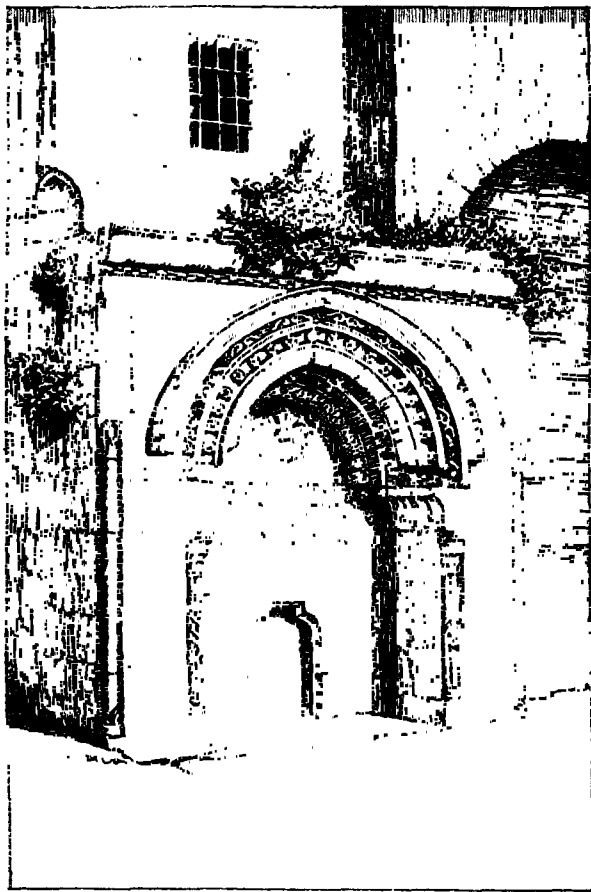


FIG. 51. JERUSALEM: A STREET FOUNTAIN.
M.S.B. del.

the Crusaders' church (1140-9) with pointed arches, clustered pillars, groined vaulting, and consisting of a nave and aisles, with an ambulatory and semicircular eastern apse. The bell-tower (about 1160-80) and the south façade also remain. Other interesting relics of the period are the twelfth-century portal of the Hospital of the Knights of St. John (now incorporated in the modern German Church of the Redeemer),

¹ See my book *In the Heel of Italy*, figs. 7-11, for illustrations of a church built by Tancred, King of Sicily, in 1180. This build-

Palestine was usually a simple pointed form, though in Palermo, Lecce,¹ and elsewhere in Italy the pointed horseshoe type is found. Vaulting was simple, usually groined. Engaged or detached columns were used, with capitals treated with a rather stiff and conventional type of acanthus foliage. At Nablus a fine doorway remains, at Ludd a beautiful arch, and at Qaryat al-'Inab there is a noteworthy window. At Cairo is perhaps the most beautiful Crusader doorway extant, brought from the Christian church at Acre in 1291, and incorporated in the mosque of an-Nāṣir. In Jerusalem itself the Crusaders erected a large number of churches, besides the Holy Sepulchre, about which whole books have been written. That famous building, in spite of extensive and lamentable alteration, still preserves its original plan; as well as the nave of

ing (containing horseshoe arches) should be compared with the Crusaders' church at Gaza.

and the Chapel of the Virgin's Tomb (1161), a dainty little building between the Ḥaram ash-Sharīf and the Mount of Olives. In the Ḥaram ash-Sharīf itself the Crusaders' work included the remarkable vaults known as 'Solomon's Stables', and the beautiful grille of French hammered ironwork, with lily-heads between the spikes, round the central octagon of the Dome of the Rock (Fig. 8). The footprint of Muḥammad on the actual rock was temporarily re-christened as the footprint of Christ, thus satisfying all hostile criticism. The rock was paved over with marble, and an altar erected, but Saladin cleared all this work away when he restored the mosque to its original uses in 1187. The mosque of al-Aqṣà, too, was used as a Christian church by the Templars (cf. p. 38) and reconverted by Saladin. Speaking in general of the churches of the Crusaders in Palestine, it may be said that they all possess the following distinctive characteristics. They consist of a nave and aisles of equal length, a transept, and three apses. They are vaulted in stone, the vaults being supported on simple piers, usually square with engaged shafts. Over the crossing of nave and transepts is a dome on pendentives, the remainder of the roof being flat. Pointed arches are used, and buttresses have slight projection. Not only were the Norman knights of Sicily and Southern Italy partly responsible for the Norman-Italian type of Gothic architecture that we find used, but the Pisan, Venetian, and especially Genoese¹ sailors and merchants who played so prominent a part in the Crusades also left their mark on the churches of the Holy Land.

The influence of the Crusaders hardly appears in the mosques built during the time of Saladin or of his immediate successors, except in one very noteworthy instance—the porch of the mosque of al-Aqṣà at Jerusalem. The fine *mimbar* or pulpit in this mosque was brought here by Saladin, where it had been installed in the Great Mosque by Nūr ad-Dīn twenty years before. The comparative absence of monuments of any importance in Cairo between 1193 and 1250 may be ascribed to the general distress prevailing in Egypt during the earlier part of the period, and to the constant fighting with the Crusaders that lasted up to 1249, when they were finally driven out from Damietta, which had, curiously enough, taken the place of Jerusalem as their objective. Yet the rulers of Egypt appear to have been enlightened men of culture, so tolerant that in 1219 we hear of St. Francis of Assisi preaching before the Sultan, and finding an attentive audience. The only building of any note is the *madrasah* constructed in 1241-4 by the last Ayyūbid sultan, Ṣāliḥ Najm ad-Dīn Ayyūb, in the Sharia al-

¹ For the Genoese architecture of this of Genoa' (Nos. I-II) in *The Builder* (July, period see my articles 'The Architecture 1914).

Jawhariyyah, and the adjoining mausoleum completed in 1250.¹ A large part of the group is ruined, but there is a striking minaret in three stages—the lowest rectangular, the next octagonal, the third of a remarkable *mabkharah* form. The mausoleum is a large square structure covered with a simple dome having primitive stalactites in the pendentives. The *mihrāb* (when I saw it in 1916) was somewhat dilapidated, and was flanked by columns of green marble. North of the mausoleum is a square porch vaulted in stone, an unusual feature. The façade is, unfortunately, partly concealed by shops, but is decorated with Persian arches, and curious but characteristic battlements of Mesopotamian type.

In Palestine and Syria a good deal of Ayyūbid architecture survives from the period 1193–1250. One of the *mawāzīn* (arcades) on the south side of the podium of the Dome of the Rock, at the east end, bears the date A. H. 608 (A. D. 1211), the remaining *mawāzīn* being later. Damascus, as the capital in Saladin's later days, was a city of great splendour. The sultan himself lived in the castle,² then isolated from the remainder of the city. Some parts of this citadel or castle are earlier than the time of Baybars (thirteenth century). Here, too, was the Sultan's mosque. According to Ibn Jubayr, writing in 1184, the city contained at that time twenty colleges, two free hospitals, and many monasteries.

‘Near the castle, outside the town towards the west, are two Meydans that are like pieces of silk brocade rolled out, for their greenness and beauty. The river flows between the two Meydans, and there is a grove of poplar-trees extending beside them, most beautiful to behold. The Sultan is wont to go there to play the game of polo and to race his horses ; and nothing can be pleasanter to see than this. Every evening the Sultan's sons go out there to shoot the bow, and to race, and to play polo.’

Yet of all these glories nothing authentic remains except parts of the Citadel and perhaps the ‘Ādiliyyah *madrasah*, though that is a building of some importance.

The monuments of Aleppo still await their historian, but most of the following bear inscriptions authenticating their dates : the *Māristān* in the Jallūm quarter (ascribed to Nūr ad-Dīn), the *Madrasah* of al-Ma'rūf (1193), the Mosques of Ḥusayn and Shaykh Muḥsin (1211–13), the Great Mosque in the Citadel (1213–14), the *Madrasah al-Sultāniyyah*

¹ For a description of this mausoleum and *madrasah*, with many excellent illustrations, see Mrs. Devonshire's *Some Cairo Mosques*, pp. 11–29.

² For plan of the Citadel of Damascus by Prof. Herzfeld see article by M. Sobernheim, ‘Die Inschriften der Zitadelle von Damascus’, in *Der Islām*, Band xii (Berlin, 1921).

(1223), the Mosque of al-Kaltāwiyyah (1223), and the Madrasah al-Ashrafiyyah or ash-Sharafiyyah (1242-3).¹ Several other Ayyūbid buildings in Aleppo are mentioned by Sobernheim and Herzfeld in their article 'Ḥalab' in the *Encyclopaedia of Islām*. These two writers, who promise a more exhaustive study of the architecture of this somewhat neglected but very important centre, point out that Aleppo is a far more fruitful place than Cairo in buildings of the period.

Of the Ayyūbid monuments of Aleppo the most important is undoubtedly the great gate and entrance-bridge of the Citadel, which is strikingly situated on a great mound or rock-base, apparently partly artificial.² For centuries it was regarded as one of the most formidable fortresses in the East, as it had need to be, for it commanded the junction of three great trade-routes. But it is a composite structure, the work of many hands at different periods. The great gateway is the finest example of such a feature in all the lands of the East. The Great Mosque in the Citadel was rebuilt by Ghāzī, son of Saladin, in 1213-14, on the site of an older sanctuary. It is, according to Sobernheim, 'a rare type of mosque: a large central area with a cupola between every pair of cross-vaults, and a court in front of it surrounded by barrel-vaulted halls'.

In other parts of Syria the Qubbat al-Amjād, and the Qubbat Duris, both at Baalbek, date from this period; also the Citadel, the Arsenal, the Mosque of al-Khiḍr, and the so-called Umar mosque at Boṣrā; the old Khān of Khān Tūmān near Aleppo; the Shāfi'ite Madrasah at Ma'arrat an-Nu'mān; and the Citadel of Masyaf.¹

BIBLIOGRAPHY FOR CHAPTER V

- Besant, W., and Palmer, E. H. *Jerusalem*. London, 1899.
 Casanova. *Histoire et Description de la Citadelle du Caire* (in *Mém. Miss. archéologique française du Caire*). Paris, 1894-7.
 Clermont-Ganneau, C. *Archaeological Researches in Palestine*. London, 1896.
 Conder, C. R. *The Latin Kingdom of Jerusalem*. London, 1897.
 — *The City of Jerusalem*. London, 1909.
 Cox, G. W. *The Crusades* (in series *Epochs of History*). London, 1874.
 Gayet, A. *Les Monuments de Damiette et de Mansourah contemporains de l'époque des Croisades* (in *Revue de l'Art ancien et moderne*, vi. 71). Paris, 1899.
 Harvey, W. *Native Street Architecture in Jerusalem*. (Illustrated article in *The Builder*.) London, January, 1914.
 Jeffery, G. *The Holy Sepulchre and other Christian Churches in the Holy City*. Cambridge, 1919.

¹ For all these dates I am indebted to Capt. K. A. C. Creswell, whose work on Muhammadan Monuments in Egypt has already been frequently cited in this volume.

² A fine general view is given in Girault de Prangey's book, *Monuments arabes* (1846-52).

88 THE ARCHITECTURE OF SALADIN

- Lane-Poole, S. *The Life of Saladin*. London, 1898.
Le Strange, Guy. *Palestine under the Moslems*. London, 1890.
Marin, L. F. C. *Histoire de Saladin*. Paris, 1758.
Palestine Exploration Fund. Palestine Pilgrims' Text Society's publications, 13 vols.
London, various dates.
—— *The Survey of Western Palestine*. London, 1884.
Rey, E. G. *Les monuments de l'architecture militaire des Croisés en Syrie et dans l'île de Chypre*.
Paris, 1871.
Villehardouin and De Joinville. *Chronicles of the Crusades* (Everyman's Library). London,
1908.
de Vogüé, M. *Les Églises de la Terre sainte*. Paris, 1860.
—— *Le Temple de Jérusalem*. Paris, 1864.

VI

THE BUILDINGS OF THE TURKISH MAMELUKES

(A. D. 1250–1382)

IN a previous chapter¹ I have explained the meaning of the word 'mameluke', which gives the name to the architecture of Egypt and Palestine between the end of the Ayyūbid dynasty in 1250 and the conquest of Egypt by the Turks in 1517. This long period is invariably divided into two nearly equal portions—the first covering the reigns of the Turkish or 'Bahrite' sultans from 1250 to 1382, the second the reigns of the 'Circassian' or 'Burjite' sultans from 1382 to 1517. The former derived their Arabic name from the fact that they were all mamelukes from a barracks near the river (*bahr*) at Cairo, the latter from their quarters in the fort (*burj*) or Citadel of Cairo. Both Turks and Circassians were imported white slaves, brought into Egypt as soldiers, and invariably becoming—like the mayors of the palace in the Frankish kingdom—the rulers of the country that employed them. It is even more remarkable, perhaps, that these usually cruel and often martial barbarians were responsible for the building, if not the design, of all the most beautiful monuments of the Middle Ages in their empire, which included—with occasional interruptions—the whole of Syria and Palestine as well as Egypt. It has been noted by all writers on this period that, in spite of almost constant intrigue, rebellion, and warfare throughout these three centuries, the mameluke sultans and their powerful *amīrs* lived amid all the luxury that great wealth could provide, and surrounded themselves with all the artistic treasures that could be produced in a country renowned for skilful craftsmanship. The progress of the arts is to a large extent dependent on the taste of the ruling class, and the long list of their fine buildings, furnished with every imaginable accessory in carved woodwork, mosaic, inlaid metal, and coloured glass, give the lie to Gayet's statement² that the mamelukes, even when they became *amīrs* and sultans, had the souls of slaves, and that art to them was only a means of asserting their power and of gratifying their extravagant fancies. Gayet apparently made this assertion to support his theory that every achievement of Saracenic art was due to the native genius of the Coptic craftsmen of Egypt. Yet though the mosques of Ibn Tūlūn and al-Aqmar, the fortifications, gates, and Citadel of Cairo, and many other buildings in the capital

¹ p. 48.

² Gayet, *L'Art arabe*, p. 117.

and elsewhere, have already shown us the variety of foreign influences that were fused together in this great emporium of all the arts, it is in the splendid period of the mamelukes that we find the mosques and mansions of Cairo displaying the characteristics of Normandy, Byzantium, Persia, Turkestan, and India combined together with the older works of Copts and Saracens in the culminating centuries of the style.

The history of this chequered age is a complex record of war, civil strife, and bloodshed in general. Some sixty sultans occupied the throne, often with stormy intervals in the longer reigns when an ambitious *amīr* captured the throne for a few months before he himself was assassinated by the superseded or fugitive monarch. Throughout these centuries Cairo was by far the most important city of the empire, and the remarkable length of the list of her monuments outshines all those of Aleppo, Damascus, Jerusalem, and the other principal towns. Moreover, the buildings of the capital were finished with a luxury and refinement of taste that always impresses a traveller arriving in Cairo after an architectural tour of the Syrian cities. The provincial towns of Egypt, although some—such as Alexandria, Damietta, and Rosetta—had a certain importance in the Middle Ages, cannot show half a dozen mosques of the mameluke centuries to compare with the hundreds contained in the square mile or so of the surviving mediaeval quarters of Cairo.

To the student of architecture, then, the general history of this period is unimportant. In three aspects, however, it has a claim on our consideration. The feudal system in which the mamelukes formed a link, the state of life and civilization in Cairo and elsewhere during these troubled years, and the lives of the dozen or so of the rulers who were responsible for most of her buildings, all these were factors influencing the great group of Saracenic architecture to be described in the latter part of this chapter.

The actual meaning of the word 'mameluke' (or, more correctly rendering the Arabic original, *mamlūk*) is 'owned', or 'belonging to', hence, 'a slave'. The slaves imported into Egypt were nearly always Turks, and these, with the Sudanese, formed the bulk of the army. But more especially they were used to form the Sultan's bodyguard, a *corps d'élite*, as Lane-Poole has aptly termed it. Apparently there was no stigma attached to their position as slaves. Under Saladin, but still more under his grand-nephew Ṣāliḥ Najm ad-Dīn Ayyūb, the mamelukes had become very powerful, for they shielded the person of the sovereign from the treacherous attempts on his life that were almost matters of daily routine. In command of a battalion was a colonel, or '*amīr* of a thousand'. During every reign, but especially when a child-sultan occupied the throne, the *amīrs* struggled among

themselves for power. There was a period when the descendants of the Sultan Qalāwūn (himself a mameluke) occupied the throne in succession for many years, but with this exception no hereditary succession existed, and the *amīr* who could command the most powerful following fought his way through piles of corpses to the throne, often to find himself in the cemetery a few months later. The reigns of most of the sultans were thus very short, and we find the names of prominent *amīrs* commemorated in many of the principal mosques of the period, for they based some of their power on popularity gained by lavish expenditure on building. To keep himself alive, the Sultan showered gifts on his bodyguard so long as they remained faithful to him, and thus the greater part of the lands of Egypt passed into the possession of the mameluke *amīrs* as great fiefs. The Sultan on his accession added to his ordinary name and title some epithet, such as al-Malik al-Manṣūr, 'the victorious king', and thus the full name and titles of such a sultan as Lājīn, who was at one time the slave of the Sultan al-Manṣūr, would read as follows: as-Sultān al-Malik al-Manṣūr, Husām ad-Dīn Abū-l-Fath Lājīn al-Manṣūrī ('The Sultan, Victorious King, Sword-blade of the Faith, Father of Victory, Lājīn, Mameluke of the Sultan al-Manṣūr').¹ This lengthy title explains the complicated names of some of the Cairo mosques, which should strictly be described by the personal name of the founder (e. g. in the above case, Lājīn). In some cases we find that even this personal name is an assumed one (e. g. Ṭūlūn = full moon, Baybars = Prince Panther, Qalāwūn = Duck, Lājīn = Hawk).¹

Light on the court-life of the mamelukes is shed by the names of some of the mosques built by prominent *amīrs* who held high offices of state, thus Baybars *al-ḡāshankīr* was the 'Taster' (no sinecure when any cup might be poisoned), and Yūnus *ad-Dawādār*, whose mosque at Khān Yūnus was so familiar to the British army in 1917, was the imperial secretary. The mosque of the *Amīr Akhor* commemorates the Master of the Horse, the house of Jamāl ad-Dīn *al-Ustādār* the Master of the Household, while the *Bayt al-Qādī* is the house of one of the Qādis or judicial officers. These were, however, only some of the large retinue of influential mameluke *amīrs* occupied in the business of the court and the offices of the state, which was a highly organized and efficient machine. Even the continual story of war and intrigue did not interfere with the gorgeous pageantry of the palace as described by contemporary historians. Most of the sultans, their *amīrs* also, were fond of sport and every form of amusement. In some cases they displayed abstemious habits, in others they were depraved gluttons rivalling the worst debauchees described by Gibbon,

¹ S. Lane-Poole, *Saracenic Art*, pp. 14, 19.

but always there seems to have been patronage of the arts and a varying measure of encouragement for religious buildings. Several of the stone-built palaces of the amīrs still remain, though in a ruined condition, and are briefly described in Chapter IX of this book.

But throughout this brilliant epoch the life of the populace must have been too exciting for comfort. The gorgeous decorations of the mosques can have afforded small recompense for the constant turmoil caused by street-fights among the various mameluke factions, when neither person nor property was safe. In the early part of the fourteenth century there was great persecution of the Christians, who were credited with burning down mosques, among other crimes against society. The Muslims retaliated with attacks on churches, and thus much of the Christian architecture of Egypt and Palestine, as well as many of the older Saracen buildings, perished by fire. Maqrizī describes how some of the mosques and hospitals were constructed, the workmen urged on with blows of a whip by the *amīr* in charge, stationed on a ladder whence he surveyed the whole site. Marble columns and slabs, woodwork and other materials, were collected forcibly from all parts of the Saracen empire, notably from the captured buildings of the Crusaders. As Gayet remarks, the story of these operations recalls the bad old days of the Pharaohs, when armies of slaves died in constructing such vast monuments of iniquity as the Pyramids. Yet one cannot believe that all this marvellous craftsmanship was done by whip-driven slaves. It is certain that the superb delicacy and refinement of the art of the modeller, the wood-carver, and the worker in metals, can only have been produced under circumstances extremely favourable for an artist who loved his work. Nor can the great advance made in the design of façades, the grouping of minarets, and the construction of domes be attributed to a period of artistic slavery. A recent writer has made an exhaustive study¹ of the influence on architecture of the condition of the worker, and if there is anything at all in his theory, the mameluke period cannot have been so unfavourable to the well-being of the artisan in Cairo as has been sometimes supposed. It may be that the craftsman fared better than his fellows in other walks of life simply because his talents were useful to the reigning despot, and that, as in other famous periods of art, he prospered where the proletariat as a whole groaned under the lash. Occasionally we find a mention of the architect among Arab historians of the period. Thus it is related that some of the architects employed in Cairo were Turks or Tartars by birth, and 'Abd al-Latīf, in his *Relation de l'Égypte*,² tells us how the

¹ T. S. Attlee, *The Influence on Architecture of the Condition of the Worker* (London, 1920).

² 'Abd al-Latīf, *Relation de l'Égypte*, trad. par Silvestre de Sacy (Paris, 1810). The English version is my own.

architect drew his plans or, more strictly speaking, how he 'set out' the plan on the site :

' When any one wishes to erect a palace, house, or any other building, he sends for an architect. The latter then visits the site, thinks out in his mind how the site should be laid out and how the various parts of the building should be disposed to comply with the instructions he has received ; after that, he takes in hand the various parts in turn, in order that each can be brought into use and inhabited as soon as it is finished without waiting for the whole to be completed. As one section is finished, he then takes in hand another, and so on, until the whole building is completely finished by uniting all the various parts, without any defects in the whole scheme, any wasted spaces, or any omissions that have to be remedied later.'

This somewhat prolix explanation does afford some justification for the employment of an architect, and has not lost its value even to-day. Another paragraph from the same writer is interesting :

' The architect, with the help of *a bag of plaster*, marks out on the ground the boundaries and division-walls of the building, according to the instructions of his client, then the actual work of construction is begun.'

Gayet ridicules the possibility of setting out the elaborate buildings of the mameluke sultans by this rule of thumb method, which after all is not unlike the modern way of lining a tennis-court, but with dry instead of wet material. He argues with reason that the extraordinary elaboration of the masonry throughout this period must have involved not only accurate and numerous drawings before building was commenced, but also a very thorough knowledge of geometry, in which the Arab mind has always excelled. The mameluke architect, then, whether Copt or Persian or Byzantine, must have been always a considerable mathematician.

The patrons for whom he worked, during the century and a half of the Turkish mamelukes' rule, included over twenty sultans besides a host of amirs. Yet of these sultans only four stand out in architectural history as great builders, and the last of the four was a vicious youth whose great mosque must be due to the energy of his amirs. The throne of Egypt was occupied in 1250 by a woman—(a circumstance almost incredible in an Oriental country)—Queen Shajar ad-Durr (= 'Spray of pearls'), during whose reign Saint Louis of France and his queen slunk out of Damietta after paying a huge ransom to the Saracen conquerors. For seven turbulent years she ruled Egypt and

Syria, a second husband being provided for her meanwhile, until she fell a victim to assassination. Her memory is preserved in the mosque and mausoleum that she erected over the tomb of her first husband, the Sultan Ṣāliḥ Najm ad-Dīn Ayyūb (as mentioned in Chapter V),¹ and in the mausoleum bearing her own name,² and dating according to Creswell from A. D. 1250, not very far from the great mosque of Ibn Ṭūlūn.

The first of the great mameluke builders was as-Sultān al-Malik az-Zāhir Rukn ud-dunyā wa'd-din Baybars al-Bundukdārī as-Ṣāliḥī, known briefly either as az-Zāhir or Baybars. His ancestral home was near the Ural mountains. He was constantly at war with the Mongols—who actually reached Gaza at one time—with the Crusaders clinging to the coasts of Palestine, and with the tribes of the Sudan. At the height of his power his empire comprised rather more than the modern territories of Egypt, Syria, and Arabia. He reigned from 1260 to 1277. He made Cairo more than ever the capital of the Saracen empire, even to the extent of installing an Abbasid caliph in the Citadel as the pontiff of Islam. He concluded treaties with the rulers of Sicily, Anjou, Spain, and Byzantium, as well as with the great potentates of the East, and the influence of various countries is apparent in his buildings. In Cairo a fragment of his *madrasah* remains inside the city walls, and the greater part of his large congregational mosque outside. North of Cairo is his bridge at Abu'l-Munajjā, and near Ludd, in Palestine, another very similar bridge. The mausoleum of Muṣṭafā Pāshā in Cairo was built in his reign, also mosques at Aleppo, Boṣrā, and Damascus in Syria; and at Ramlah in Palestine.

Two years after Baybars was poisoned, Sultan Qalāwūn ascended the throne, and held it until he died a natural death in 1290. His reign closely resembled that of Baybars. He continued the wars in Palestine and Nubia, but especially against the Mongols. In Cairo he built a *madrasah*, a mosque, and a *māristān*, forming together one of the most beautiful architectural groups in the whole city. Outside Cairo no buildings of importance appear to have been erected.

His death was followed by the usual scramble for the throne; but in 1293 al-Malik an-Nāṣir Nāṣir ad-Dīn Muḥammad, commonly called an-Nāṣir, became sultan at the age of nine, and retained the title till his death in 1341. His long reign continued the fierce war with the Mongols, who occupied Damascus for a few months in 1300 and destroyed many of Nūr ad-Dīn's buildings there. But it was civil rather than foreign strife that characterized his reign. Twice the throne was occupied temporarily by an ambitious *amīr*, on the first occasion by

¹ See p. 86.

² Illustrated and described, with an account of the recent restoration, in Mrs. Devonshire's *Some Cairo Mosques*, pp. 36-7.

Lājīn, who was murdered, and on the second by Baybars al-Jāshankīr, who was starved to death. The former is remembered for his restoration of the mosque of Ibn Ṭūlūn, the latter for his *madrasah* near the Bāb an-Nāṣir, both in Cairo. There was bitter persecution of the Christians, and an earthquake in 1303 only augmented the excitements of life in Cairo at this period. Yet it was an era of great prosperity and brilliance externally, and the character of the sultan is very well summed up by Professor Lane-Poole :

‘ This self-possessed, iron-willed man—absolutely despotic, ruling alone—physically insignificant, small of stature, lame of a foot, and with a cataract in the eye—with his plain dress and strict morals, his keen intellect and unwearied energy, his enlightened tastes and interests, his shrewd diplomacy degenerating into fruitless deceit, his unsleeping suspicion and cruel vengefulness, his superb court, his magnificent buildings—is one of the most remarkable characters of the Middle Ages. His reign was certainly the climax of Egyptian culture and civilization.’¹

The architectural examples surviving from his reign are very numerous, especially in Cairo. In that city are found the two mosques of an-Nāṣir himself—one in the heart of Cairo, the other in the Citadel—the remarkable doorway of the entrance of the Bath of the Amīr Bashtāk, the aqueduct connecting the Citadel with the Nile, the large mosque of al-Māridānī, the palaces of the Amīrs Bashtāk and Yashbak, and the mosques of the Shaykh Zayn ad-Dīn Yūsuf and of the Amīrs Sālār and Sanjar al-Jāwli, Aḥmad al-Mihmandār, Almās, and Qūṣūn among others, as well as the work of Lājīn and of Baybars al-Jāshankīr already mentioned. Outside Cairo, in Syria and Palestine, a fair number of buildings of the period remain, including the Bāb al-Qaṭṭānīn, the Bāb al-Atām, and some of the *mawāzīn* of the Ḥaram ash-Sharīf at Jerusalem, as well as a *madrasah* in the same city ; the well-known minaret or tower at Ramlah ; and mosques at Aleppo, Ḥamā, Hebron, and Tripoli.

The long reign of an-Nāṣir was followed by another interrupted epoch when six sultans changed places in six years. During this brief interlude the so-called ‘ Blue Mosque ’ at Cairo was built (though since that date it has been considerably altered), also one or two buildings of little note in Syria.

In 1347 appeared Sultan Ḥasan, who occupied the throne till 1361. His name is associated with one of the largest and most splendid—(many critics consider it the most splendid of all)—of the many mosques of Cairo, but it is difficult to believe that this wonderful building can have been even influenced by the despicable personality

¹ S. Lane-Poole, *The Story of Cairo*, p. 215.

of this sultan. Rather must we ascribe so grand a scheme to the energy of his amīrs, of whom some—such as Şargitmish and Shaykhū—have themselves built fine mosques. From 1361 to 1382, the end of the Turkish mameluke period, neither the sultans nor their buildings were of great importance, but mention should be made of the mosque of Sultan Sha'bān and that of the Amīr Al-jāy al-Yūsufi in Cairo.

In examining the numerous noteworthy buildings of this century and a half in detail we may divide them into four main groups, under

the names of Baybars, Qalāwūn, an-Nāşir, and Sultan Ḥasan, including in the last group the mosques erected in the seven years before and the twenty-one years after that sultan's reign.

The most important of the first group is undoubtedly the great congregational mosque built outside the mediaeval walls of Cairo on the main road to 'Abbasiyyah and Heliopolis (Figs. 52, 53, 54, 55, 56, 58, and 59). Its fortress-like appearance, bereft of domes or minarets, always puzzled the British soldiers on their way from barracks and camps into Cairo during the war. It did not in any sense comply with one's preconceived notions of what a mosque should be. Nor

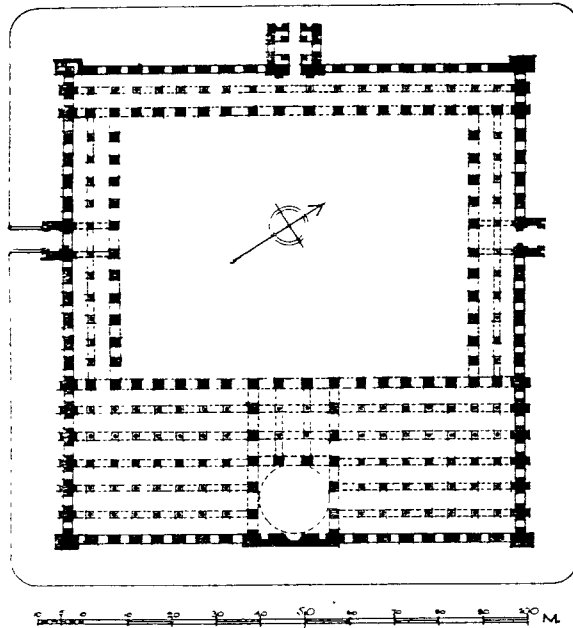


FIG. 52. CAIRO: MOSQUE OF BAYBARS I ('ZĀHIR'). PLAN

was its use in those days¹ calculated to produce the effect of a religious building, for it had been commandeered as an army bakery and meat dépôt, so that strings of dingy lorries and 'G.S.' wagons daily passed under the beautiful porch illustrated on Fig. 53. It was known locally as the 'Old Slave-market', or the 'Abattoir', but its use as a bakery dates back to Napoleon's occupation. The appearance of a fortress is still further suggested by the present road-level all round the building being several feet higher than the level of the mosque-floor or a narrow railed strip round the walls, the latter thus resembling a moat. At the time that I left Egypt² the interior was being laid out as an ornamental garden. The removal of the ugly military store-houses and Napoleon's great ovens would do much to restore some dignity to the courtyard. But, as practically all the columns and arches of the *liwānāt* have gone,

¹ Early in 1916.

² April, 1919.

together with the tracery or grills of the windows and most of the cresting of the battlements, the glory of Baybars's building could only be recreated by very extensive restoration. Built in 1266-9, the building preserves many of the characteristics of the earlier congregational mosques, such as those of Ḥākim and Ibn Ṭūlūn. In form it is nearly square, with a deep *li-wān* on the Mecca side and narrower *liwānāt* on the three remaining sides. The external walls are of much the same proportionate height as those of Ḥākim, and were originally crowned with the curious toothed battlements of Mesopotamian type that one finds in the *ṣahn* of al-Azhar. But the façade is of dressed stone, and its mouldings and workmanship clearly indicate the influence of the Crusaders. Still more is this influence apparent in the stone vaulting of the three porches, although the sunk niches resemble those on the façade of al-Aqmar built in the Fāṭimid period. This mosque is the only large one of congregational type built during the period of the Turkish mamelukes, and only one such occurs in the subsequent period.

Baybars also built in 1262-3 a mosque, adjoining the mausoleum of Najm ad-Dīn described in the last chapter, but most of this was destroyed when a new street, the Sharia Bayt al-Qādī, was formed. Only a fragment remains, including the stone lintel carved with lions or leopards, the sultan's heraldic device (Fig. 57).

The two bridges that also remain to us of this period, at Abū'l-

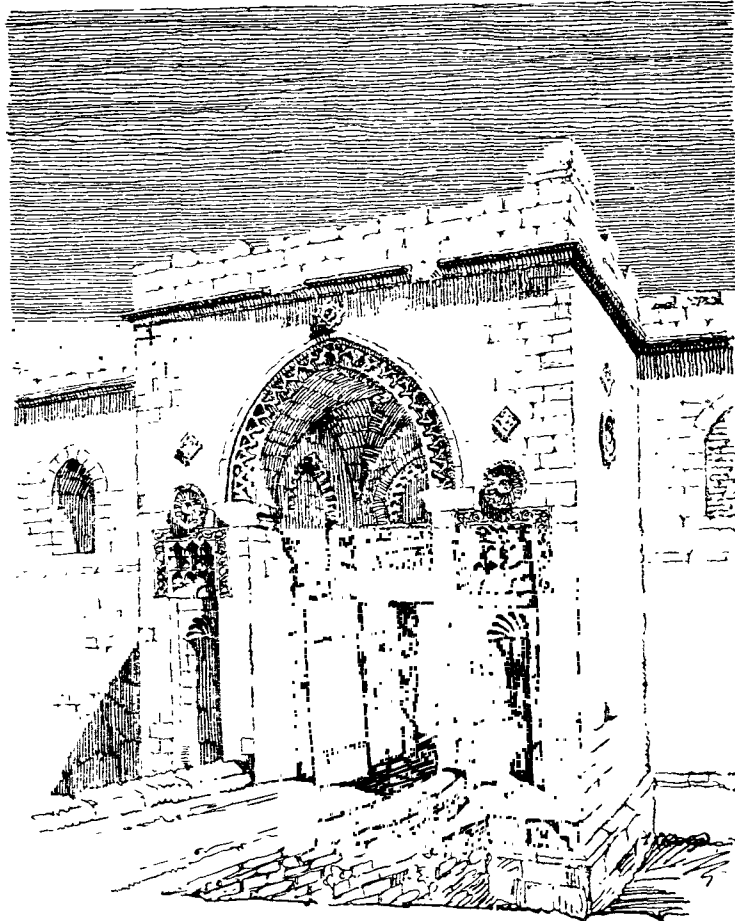


FIG. 53. CAIRO: MOSQUE OF BAYBARS I ('ZĀHIR').
S.W. PORCH. M.S.B. del.

Munajjā¹ north of Cairo, and at a point about two miles north of Ludd² in Palestine (the former being built in 1266-7 and the latter in 1273), also bear this emblem, possibly representing the 'panther' after which Baybars was named. They are both built in stone, with acutely pointed arches, and again suggest Crusader influence. The former was restored by the *Comité de Conservation des monuments de l'art arabe* (known hereafter in this book simply as the *Comité*) in 1903-4. At Damascus the greater part of the present Citadel is the work of Baybars.

The mausoleum of Muṣṭafā Pāshā in Cairo is dated by Creswell between A.D. 1267 and 1273. It is in a ruinous condition. Out of a small rectangular *ṣaḥn* opens the sanctuary recess, covered by a pointed vault and containing the *miḥrāb*. On the north side of this sanctuary is an open chamber, containing delicate ornament in relief, as do the sanctuary and the *mihrab*. There is an entrance doorway of unusual form, otherwise this mosque contains little of importance.

The *mabkharah* ('censer') or knob-shaped minaret of the Zāwiyat al-Hunūd at Cairo forms one of a group of remarkable minarets of the period, of which other examples are found in the mosques of Ḥākīm, Najm ad-Dīn, &c. They closely resemble similar work at Samarra and elsewhere in Turkestan, and remind us that Tartar influence in Cairo was strong at this time. There was constant intercourse between Egypt and these remote Turcoman countries. The Sultan Qalāwūn married a daughter of the Sultan Ezbek-Khan, there were many Tartars among his courtiers, and Maqrīzī mentions a mosque built under Baybars al-Jāshankīr by a Tartar architect.

Outside Cairo the principal monuments of this period are the mosque of al-Karīmīyyah at Aleppo (1256), a mosque near the south-east reservoir at Boṣrā (1257), and the *madrasah* and mausoleum of Baybars³ at Damascus (1277-8), the last-named a simple domed building near the Great Mosque.⁴

The architectural work of Sultan Qalāwūn is chiefly confined to one large group of buildings in the centre of Cairo, but it is of the utmost importance⁵ (Figs. 60, 61, and 62). It consists of three separate structures, a *māristān* or hospital, a mausoleum, and a *madrasah* or collegiate mosque, all carried out in the years 1284-5. In the last chapter Saladin's *māristān* in Cairo was described, and Qalāwūn's follows very similar lines.

¹ Illustrated in Saladin's *Art musulman*, fig. 70, also in Creswell, *op. cit.*

² Illustrated in Clermont-Ganneau's *Archaeological Researches in Palestine*, ii. 111.

³ Illustrated in Herz-Bey's *Baugruppe*

Qalaun (see Bibliography at end of chapter). Fig. 14.

⁴ Above dates furnished by Capt. K. A. C. Creswell.

⁵ See Herz-Bey's *Baugruppe Qalaun*, as above.

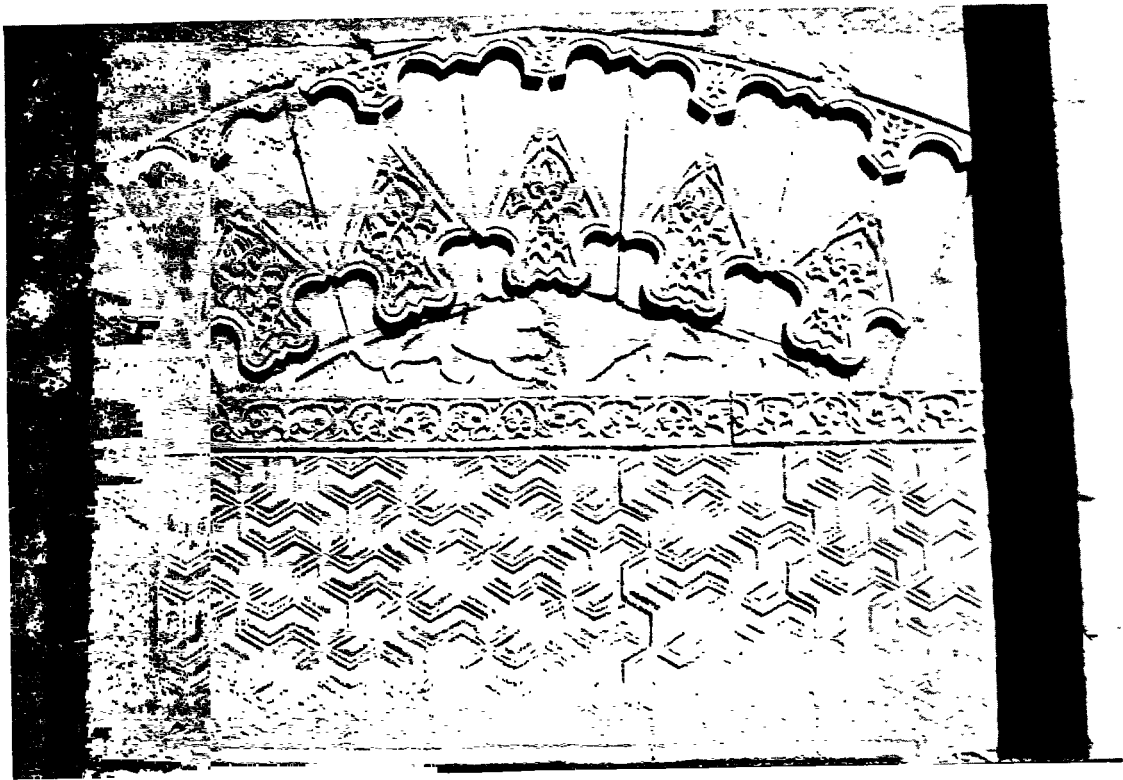


FIG. 57. CAIRO · SMALL MOSQUE OF BAYBARS I *intra muros*. Detail of doorhead

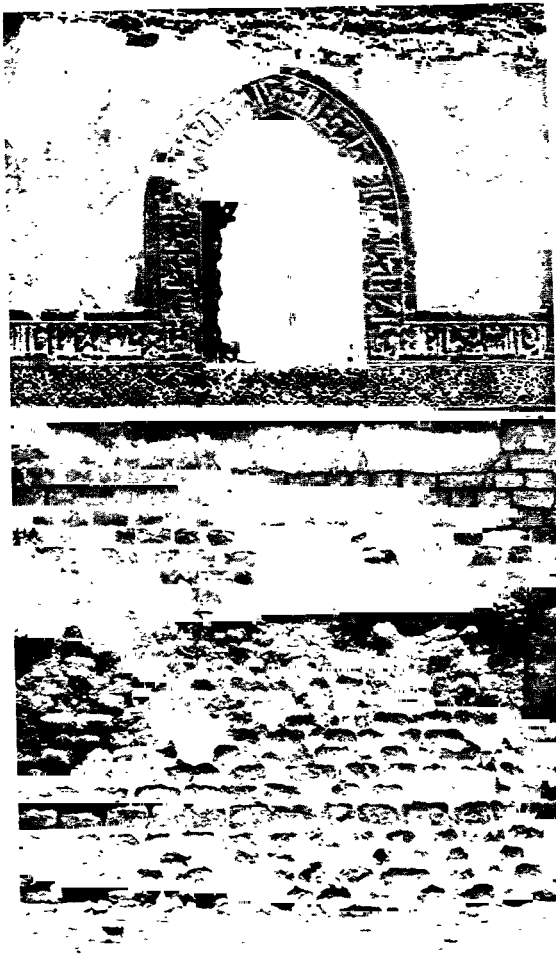


FIG. 58. CAIRO · MOSQUE OF BAYBARS I
Detail of window

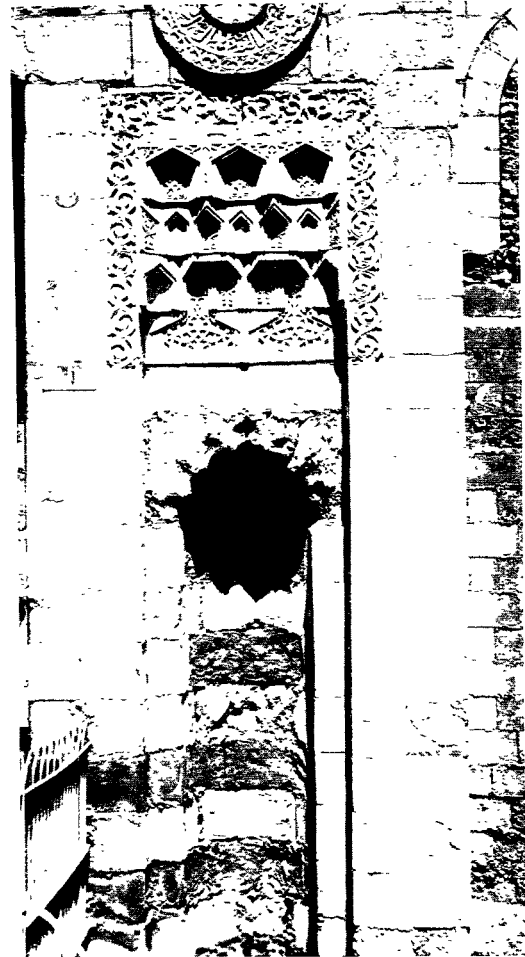


FIG. 59. CAIRO · MOSQUE OF BAYBARS I.
Detail of south-west porch

'It contains three courts, two of which are surrounded by small cells, whilst from a larger court with a colonnade on each side open a number of rooms. There were originally wards for every known disease, and a regular medical staff, lecture-room, laboratories, dispensary, baths, kitchens, and every appliance then

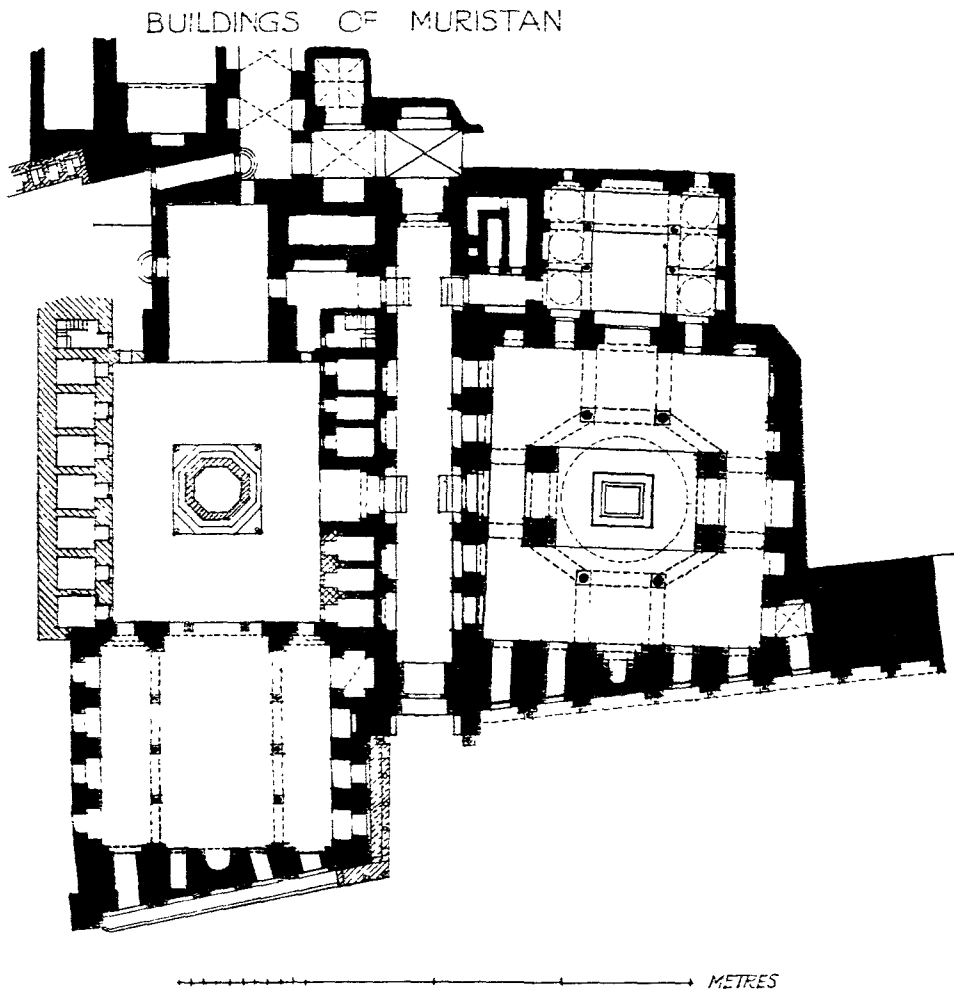


FIG. 60. CAIRO: MADRASAH (LEFT) AND MAUSOLEUM OF QALĀWŪN. *M.S.B. del., after Herz.*

understood. Musicians soothed the wakeful hours of the sufferers, whilst in the adjoining mosque fifty salaried readers of the *Ḳorān* taught the consolations of religion, and a librarian with five assistants presided over a fine collection of medical, theological, and legal books. Sixty orphans were maintained and educated in the neighbouring school.'¹

¹ Quoted from Lane-Poole, *Egypt in the Middle Ages*, p. 284

Architecturally the chief interest of this hospital with its attached buildings lies in the plan. Cairo was already in those days a crowded and busy city, so much so that even a despot like Qalāwūn could not clear an uninterrupted space for his monumental group. Yet although the site was congested, we find here an example of architectural planning on axial lines, with a sense of the possibilities of the vista. Moreover, the architect, whoever he may have been, had now advanced far beyond the stage of the early mosques when the external walls were bare and frowning enclosures. Not only did he treat the façade as a definite work involving aesthetic design, but he combined with its long lines the minaret and the dome to form one of the most striking Saracenic works in existence. The minaret had now ceased to be a mere raised point of vantage for the *mu'adhdhin*, just as the belfry of the Christian church in Europe had by this time ceased to be a mere receptacle for bells. It was an important feature of the design, and even if it was not supposed to point a finger heavenwards—as Ruskin would have us believe of the Gothic spire—it became a graceful vertical element in the *tout ensemble*, to be treated with all the whimsical skill that the fertile brains of the mameluke architects understood so well. So, too, with the dome, now destined to dispute with the minaret the chief interest of the building, but especially becoming more and more the outward and visible sign of a great man's mausoleum. The present drum is part of a comparatively recent restoration, for so recently as 1880 only the octagonal drum survived, then covered with a flat roof, but it has been reinstated in strict consonance with the style of the period as indicated in other contemporary examples. The façade of the mausoleum is undoubtedly one of the most beautiful things in all Cairo. The chequer-pattern of red and white stone with which the wall-spaces are covered externally does not offend even a western eye, for it merges wonderfully well in the rich treatment of the arcading, another feature strikingly reminiscent of the Crusaders. Again, one's mind recurs to the early Gothic churches of Genoa. The façade is crowned with the characteristic battlements already described in other examples, but they are decorated with a geometrical fretwork pattern relieving the coarseness of earlier types. The window-openings are filled with geometrical place-tracery of charming design, and a rich frieze of Qur'ānic inscriptions runs across the whole façade just above the level from which the shops of the coppersmiths were wisely removed during the restoration. The minaret is in three diminishing stages, the lower two square, the top one circular, and does not approach in grace the minarets of the fifteenth century.¹

¹ The seventeenth-century *campanile* of the Duomo at Lecce in Southern Italy, illustrated on Fig. 21 of my book *In the* *Heel of Italy*, has a remarkable affinity with this example, and suggests that Saracen influence was felt even in the Baroque period.

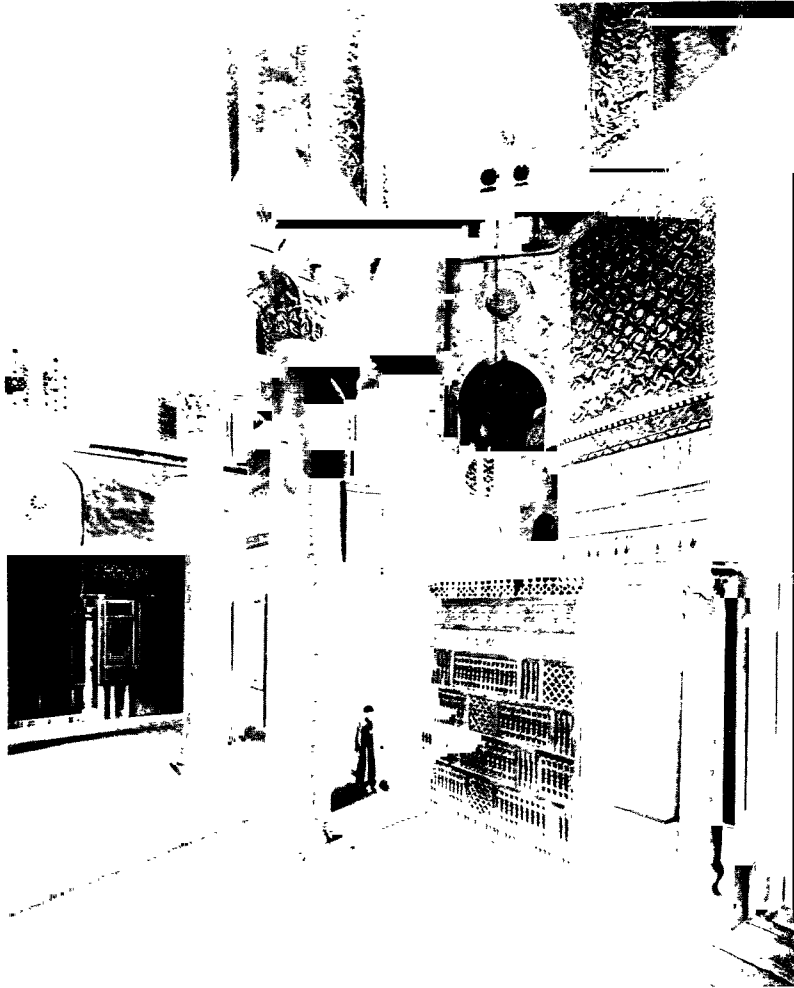


FIG. 61. CAIRO : MAUSOLEUM OF QALĀWŪN



FIG. 62. CAIRO : MAUSOLEUM OF QALĀWŪN. Exterior before restoration

Architecturally the chief interest of this hospital with its attached buildings lies in the plan. Cairo was already in those days a crowded and busy city, so much so that even a despot like Qalāwūn could not clear an uninterrupted space for his monumental group. Yet although the site was congested, we find here an example of architectural planning on axial lines, with a sense of the possibilities of the vista. Moreover, the architect, whoever he may have been, had now advanced far beyond the stage of the early mosques when the external walls were bare and frowning enclosures. Not only did he treat the façade as a definite work involving aesthetic design, but he combined with its long lines the minaret and the dome to form one of the most striking Saracenic works in existence. The minaret had now ceased to be a mere raised point of vantage for the *mu'adhdhin*, just as the belfry of the Christian church in Europe had by this time ceased to be a mere receptacle for bells. It was an important feature of the design, and even if it was not supposed to point a finger heavenwards—as Ruskin would have us believe of the Gothic spire—it became a graceful vertical element in the *tout ensemble*, to be treated with all the whimsical skill that the fertile brains of the mameluke architects understood so well. So, too, with the dome, now destined to dispute with the minaret the chief interest of the building, but especially becoming more and more the outward and visible sign of a great man's mausoleum. The present drum is part of a comparatively recent restoration, for so recently as 1880 only the octagonal drum survived, then covered with a flat roof, but it has been reinstated in strict consonance with the style of the period as indicated in other contemporary examples. The façade of the mausoleum is undoubtedly one of the most beautiful things in all Cairo. The chequer-pattern of red and white stone with which the wall-spaces are covered externally does not offend even a western eye, for it merges wonderfully well in the rich treatment of the arcading, another feature strikingly reminiscent of the Crusaders. Again, one's mind recurs to the early Gothic churches of Genoa. The façade is crowned with the characteristic battlements already described in other examples, but they are decorated with a geometrical fretwork pattern relieving the coarseness of earlier types. The window-openings are filled with geometrical place-tracery of charming design, and a rich frieze of Qur'ānic inscriptions runs across the whole façade just above the level from which the shops of the coppersmiths were wisely removed during the restoration. The minaret is in three diminishing stages, the lower two square, the top one circular, and does not approach in grace the minarets of the fifteenth century.¹

¹ The seventeenth-century *campanile* of the Duomo at Lecce in Southern Italy, illustrated on Fig. 21 of my book *In the Heel of Italy*, has a remarkable affinity with this example, and suggests that Saracen influence was felt even in the Baroque period.

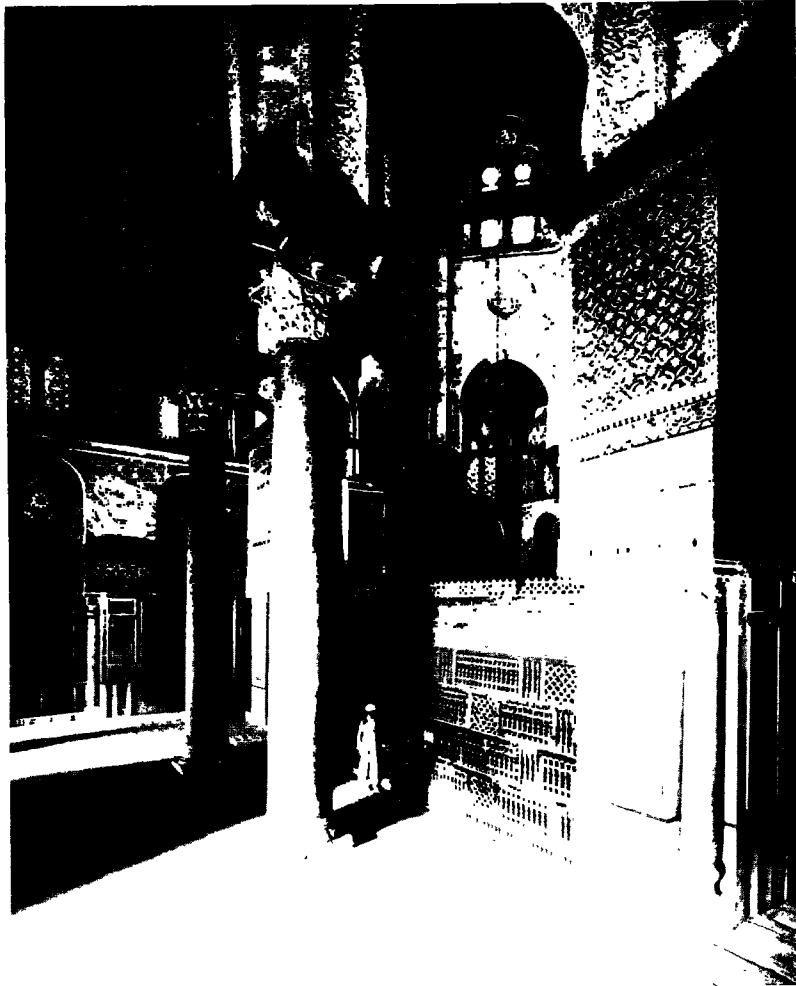


FIG. 61. CAIRO : MAUSOLEUM OF QALĀWŪN



FIG. 62. CAIRO : MAUSOLEUM OF QALĀWŪN. Exterior before restoration

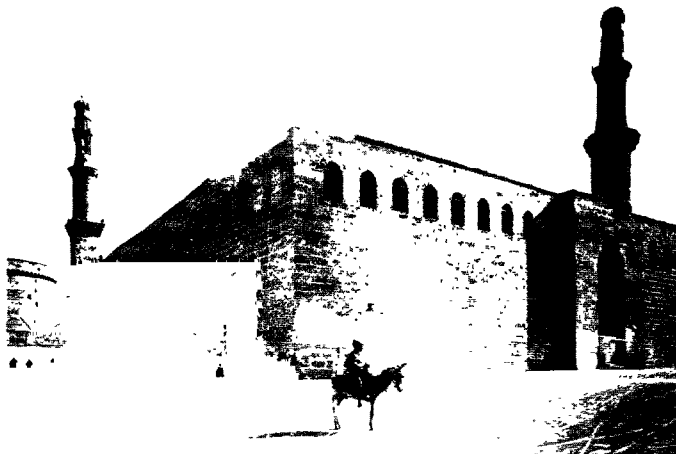


FIG. 63 EXTERIOR



FIG. 64 COURT

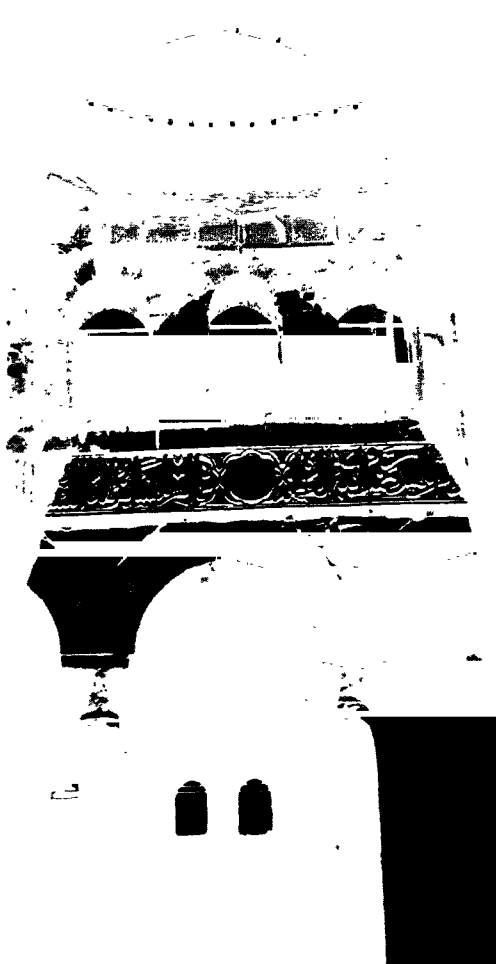


FIG. 65 DOME

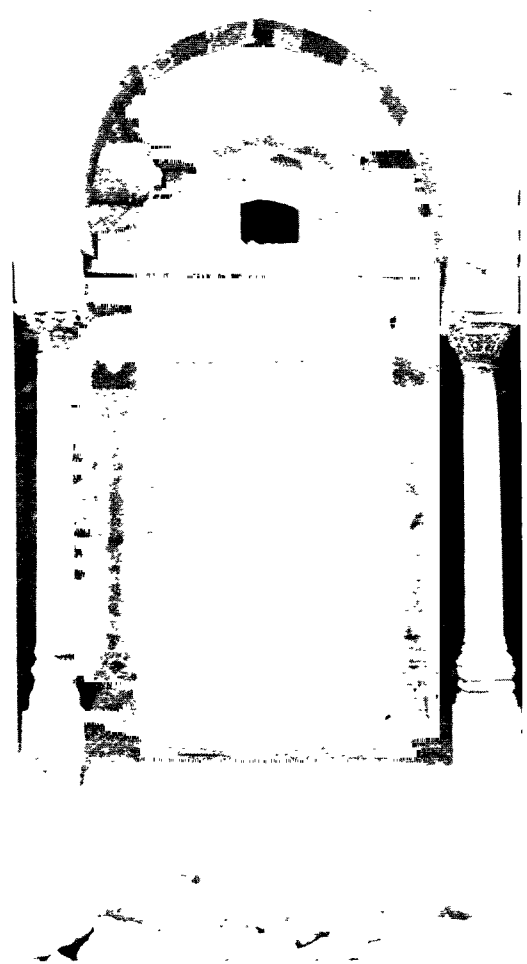


FIG. 66 DETAIL OF ARCADE

CAIRO : MOSQUE OF MUHAMMAD AN-NĀṢIR, IN THE CITADEL

The restoration of this mausoleum is perhaps the most successful of any undertaken by the remarkably able architects of the *Comité*, and as a result the interior has been to-day rendered as lovely as it was in the days of its great founder. Four great square piers, with two pairs of monolithic granite columns, support the eight arches carrying the octagon over the tomb. The arrangement of these supports is unusual, and should be compared with that of the Dome of the Rock at Jerusalem (Fig. 10), where two or three columns are used between each pair of piers. In matters of detail the interior of this mosque has no rival in Cairo, much less in Damascus or Jerusalem or Aleppo. The walls are lined with marble, the *mihrāb* has tiers of beautiful dwarf arcading and is lined with turquoise and marble. From the marble floor to the dome, the whole mausoleum is a blaze of colour, gilding, and stained glass, all in restrained and harmonious tints.

The little forecourt or atrium on the west, open to the sky, is no less attractive, and the rich decorations round the great portal of the mausoleum, in geometrical and floral patterns of stucco-work, are unmatched in the city. Were one asked to recommend to a hurried tourist three mosques in Cairo to be visited at all costs, out of 300 or so still surviving one would probably select those of Ibn Ṭūlūn, Qalāwūn, and al-Azhar, but, of the three, that of Qalāwūn represents Saracen art at its very highest level.

The adjoining *madrasah* was being restored during the war, and when the process is completed will, no doubt, rank nearly as high as the mausoleum, but can never approach it for magnificence of craftsmanship, and does not compare with the splendid *madrasah* of Sultan Ḥasan described at the end of this chapter.

The buildings of an-Nāṣir, the son of Qalāwūn, are very numerous, and are not confined to Cairo, though in that city were erected the principal monuments of his long reign. Of these two mosques the one in the Citadel is the larger and more important (Figs. 63, 64, 65, 66, and 67). Its walls are higher in proportion to their length than those of Ibn Ṭūlūn or Ḥākim, but are very bare, with a line of pointed window-openings in their upper part. On the south and west façades are lofty porches with stalactites in the pointed heads. The two minarets are the most interesting features of the exterior. They are of the Tartar *mabkharah* type mentioned elsewhere, the tops covered

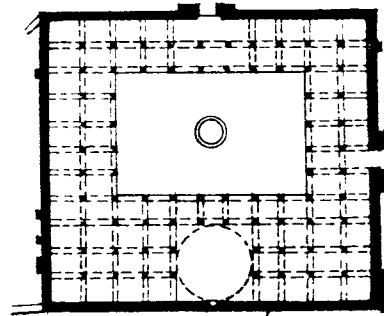


FIG. 67.
CAIRO: MOSQUE OF AN-NĀṢIR,
IN THE CITADEL. PLAN

with emerald-green glazed tiles such as one finds in Persia and Turkestan.¹ The mosque is not quite square in plan, the width from the *mihrāb* to the opposite wall being less than the other dimension. The principal *līwān* has a depth of four bays, the others two bays. The arches are slightly pointed and of horseshoe form, raised on impost-blocks and supported on antique columns standing on bases of varying height. The capitals are late Roman or Byzantine. Above the arcades runs a row of pointed windows, two over each arch. The walls are terminated with a stone capping, on which is built a 'saw-tooth' parapet on battlements. Over the space in front of the *mihrāb* is a ruined dome. This was regarded as one of the marvels of its age, but fell in 1468

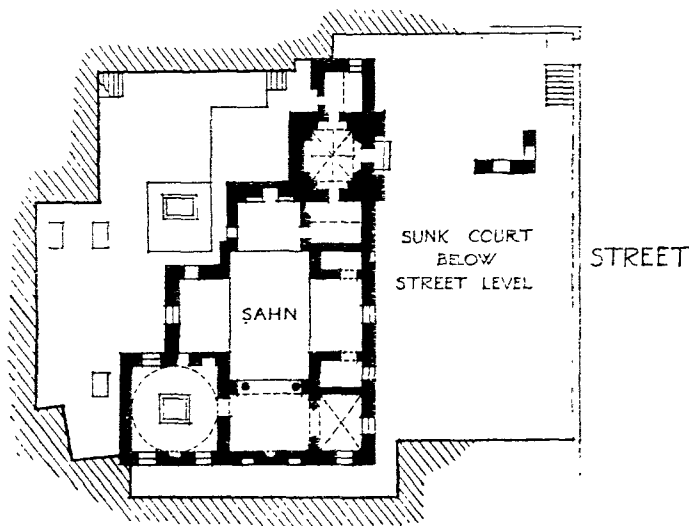


FIG. 68. CAIRO: MADRASAH OF ZAYN AD-DĪN YŪSUF.
SKETCH-PLAN

and was ordered to be rebuilt by the reigning sultan.² It still retains the *wooden* stalactite pendentives forming the transition from the square space beneath to the circular dome above. The supports of the dome are ten large antique granite columns, said to have been brought from Ashmunin. The interior as a whole must have been richly decorated at one time. But it is now in a ruinous condition, probably none the better for

being used as an ammunition-store during the war. It was erected between 1318 and 1335, a rather elaborate argument for these dates being advanced by Creswell in his *Brief Chronology*.

An-Nāṣir's other mosque is also ruined. It consists of a *madrasah* and a mausoleum (1295-1304), and suffers from its situation between the two gorgeous tomb-mosques of Qalāwūn and Barqūq. Its chief features are the primitive stalactite-pendentives of the dome (the present ceiling is flat), the stucco ornament, the unusual minaret, and especially the beautiful Gothic portal facing the street (Fig. 71). This doorway was taken from the Crusaders' church of St. John at Acre, or Akka (captured by the Saracens in 1292), and was brought to Cairo as a trophy of victory. It would be rash to assume that one solitary relic of this

¹ Also in the seventeenth-century *campanile* at Lecce mentioned on p. 100.

² See excellent photograph by Capt. Creswell in Mrs. Devonshire's *Rambles in Cairo*.

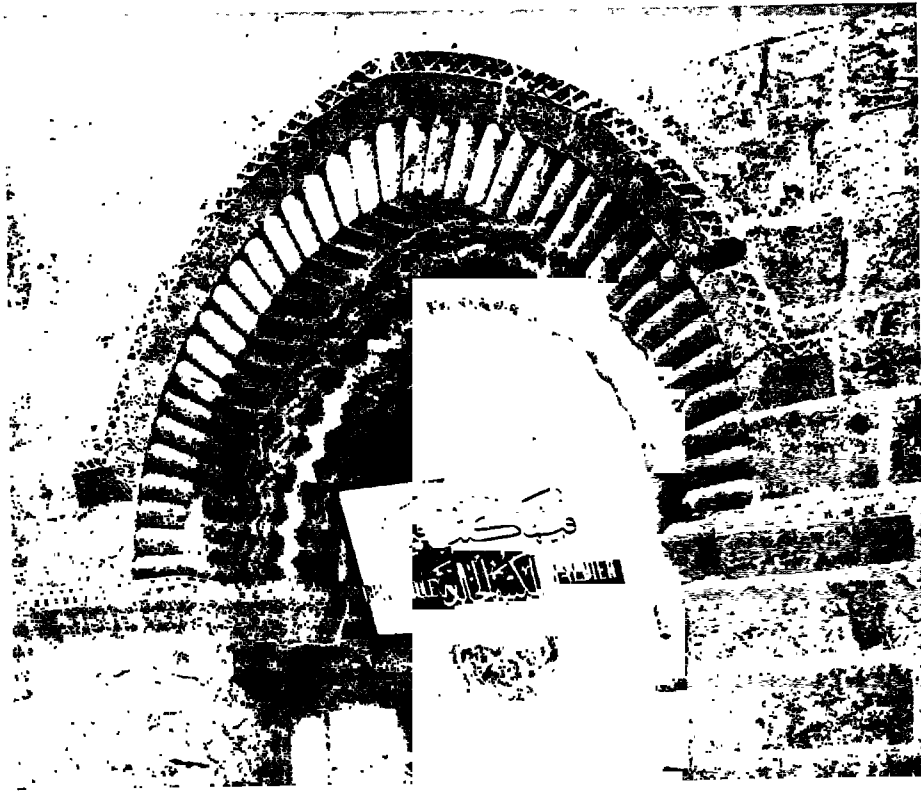


FIG. 69. DAMASCUS : a door-head



FIG 70. CAIRO
Bath of the Amir Bashtāk Doorway



FIG 71. CAIRO
Madrasah and Mausoleum of An-Nāṣir *intra muros*
Doorway

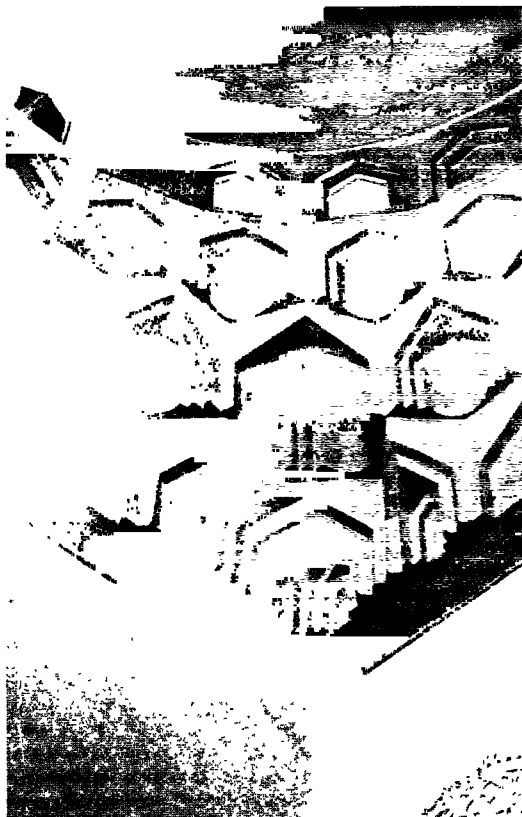


FIG 72. CAIRO
Mosque of the Amīr Almas. Dome



FIG 73. CAIRO
Madrasah of Zayn Ad-Dīn Yūsuf. Dome



FIG 74. CAIRO
Mausoleum of Queen Shajar Ad-Durr. Dome



FIG. 75. CAIRO
Mausoleum of An-Nāṣir *intro muros*. Dome

sort could have influenced the architecture of the mamelukes very seriously, but it is one more very tangible link of evidence that Crusader influence was at this time permeating Egypt from Palestine.

An-Nāṣir constructed an arched aqueduct leading from the Nile to the Citadel in 1311, and extended the Citadel towards the south in 1337-8. Creswell discusses the dates of the various portions of the aqueduct in his *Brief Chronology*, and also describes the work done at the Citadel, quoting contemporary writers :

‘ . . . a great hollow had been formed by quarrying stone for the Citadel. It was a great undertaking, and each *amīr* had to furnish 100 men and 100 pack animals for transporting the sand required. Prisoners were employed also, and the work lasted for a year and 30 days, many dying at the task. We have here the explanation of the artificial appearance of the mound on which the south end of the Citadel rests, which cannot fail to have struck all careful observers, composed as it is of sand and earth lying at its natural angle of rest, in striking contrast to the north-east enclosure where the walls stand on bare rock throughout . . . I also attribute to Muḥammad an-Nāṣir the lower tier of great vaulted chambers running along the west face of the Citadel to the south of the mosque of Muḥammad ‘Alī.’

Among the many important mosques erected in Cairo during this reign seven may be singled out for special mention.

The *madrasah* and mausoleum of the Shaykh Zayn ad-Dīn Yūsuf, at the south end of the city, is dated 1298. From the street one descends into a single courtyard, thence the entrance to the *madrasah* is through a finely vaulted square porch. The *madrasah* is of the usual cruciform type, with a central open *ṣahn*. The south-west angle, between the south and west *liwānāt*, is occupied by the mausoleum, a square chamber covered with a dome. Internally the chief interest of the building is found in the admirable stucco friezes and window-tracery, externally in the dome, with its convex fluting, curious stalactites, ornamental frieze, and pointed windows round the drum (Figs. 68, 73, and 83). The characteristic saw-tooth battlement is used.

The *madrasah* of the Amīrs Sālār and Sanjar al-Jāwli (1303-4) was built by two friends, and is noteworthy for the twin cupolas over their respective tombs (Figs. 76 and 79). The situation on the edge of a small hill is unusual, and a basement storey is used to master the differences in level. The *cloister* contains a beautiful grille or screen of pierced stone (Figs. 182 and 184) and is vaulted. At the end of the cloister is a small dome over another tomb. The square minaret is worthy of attention. Like the last-named example, this building shows the high

level now attained by the Cairo masons as well as bearing witness to the influence of the Crusaders.¹

The convent-tomb or *khānqāh* of the Sultan al-Malik Muzaffar Baybars, commonly known as Baybars al-Jāshankīr, stands near the Bāb an-Nāṣr, and is dated 1306-9. Externally the chief features are the great porch with a semicircular head, and the minaret, another example of the Tartar type common to this period in Cairo. Nearest to the street is a room with a finely-coffered and gilt ceiling, beyond lies the sultan's mausoleum, and farther back still is the *madrasah* with

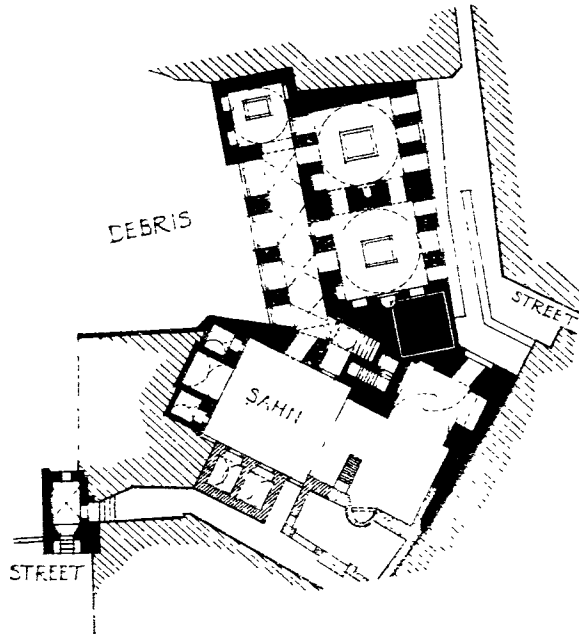


FIG. 76. CAIRO: MADRASAH OF THE AMĪRS
SALĀR AND SANJAR AL-JĀWLĪ. PLAN

an open *ṣaḥn* and *liwānāt*, which is approached from the street by a passage. The mosque is in good condition, and contains much interesting ornamental detail. The joggled joints of the marble steps and of the window-heads give some indication of the ingenuity that the Cairo mason came to lavish on these features. The dome has stalactites of rectilinear type.²

The mosque of the Amīr Aḥmad al-Mihmandār (1324-5) has been extensively restored. The façade is broken up with alternating piers and recesses, a treatment which now became almost invariable in Cairo. The recesses have a cornice formed of tiers of stalactites, and a continuous cornice

of one row of stalactites crowns the whole, with a new type of battlement above it, consisting of a foliated pattern very similar to Gothic foliation as found in Europe. This form of parapet now practically displaced the saw-tooth type that had hitherto been used. The dome is an almost counterpart of the dome of the mosque of Zayn ad-Dīn Yūsuf. Internally the mosque has a cruciform plan, but the *ṣaḥn* is covered with a flat deal ceiling. The graceful porch, with stalactites over, is one of the best in Cairo.³ The mosques of the Amīrs Qūṣūn⁴ and Almās (both 1329-30) lie not far apart near the Sharia Muḥammad 'Alī, and contain much interesting detail, but are not of outstanding importance.

¹ See report of *Comité* for 1902.

² Illustrated in *Comité's* reports for 1892, 1895; also in Mrs. Devonshire's *Some Cairo*

Mosques, pp. 49-58.

³ See report of *Comité* for 1906.

⁴ *Ibid.*, 1910.

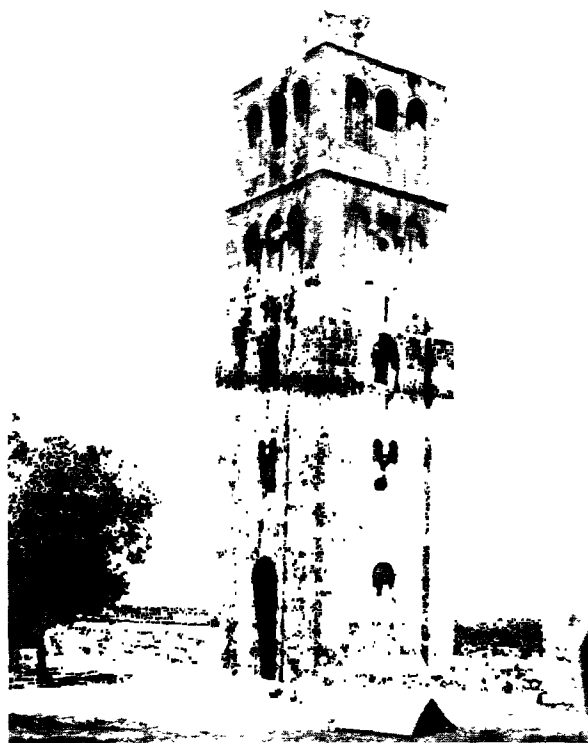


FIG. 77 RAMLAH (PALESTINE)
Minaret of the 'White Mosque'



FIG. 78 JERUSALEM
Mawāzin in the Ḥaram Ash-Sharif



FIG. 79 CAIRO
Madrasah of Salār and Sanjar Al-Jāwli



FIG. 80 JERUSALEM
The Bāb Al-Qaṭṭānīn



FIG. 82. CAIRO
Madrasah of the Amir Şargıtmış

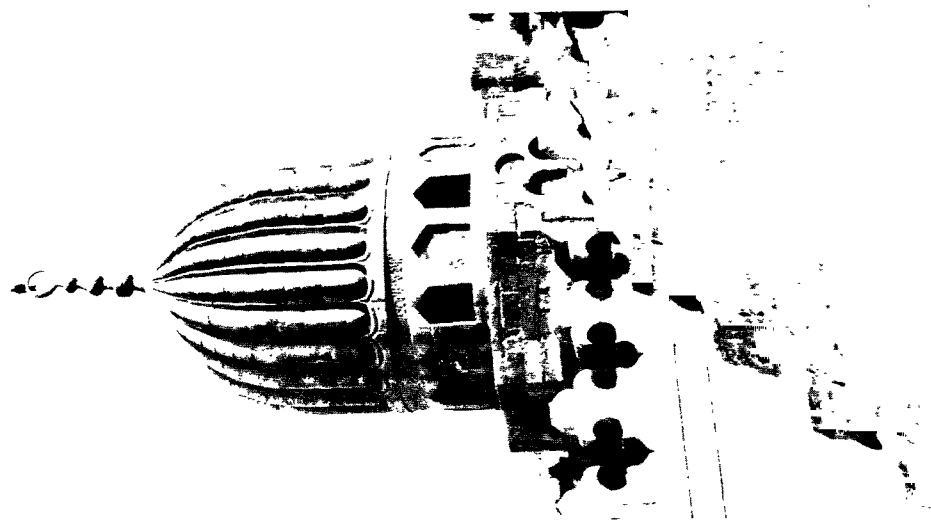


FIG. 83. CAIRO
Madrasah of Zayn Ad-Din Yūsuf

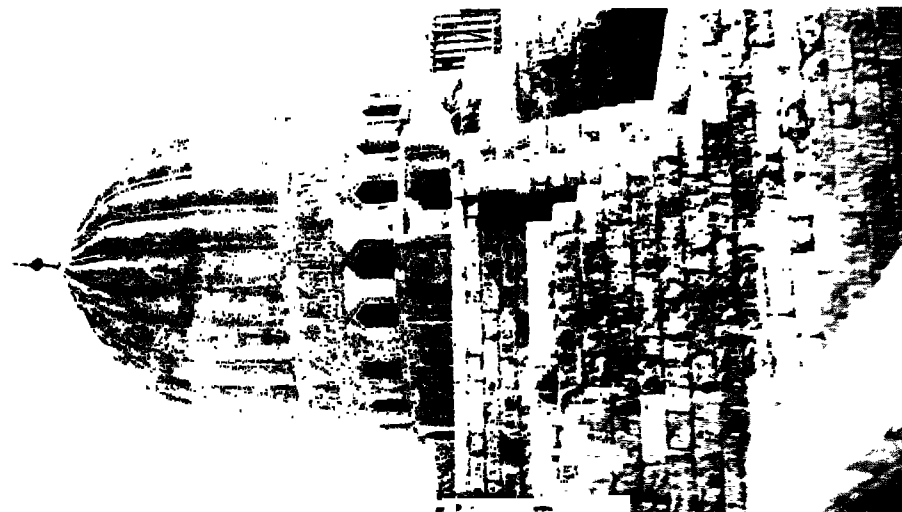


FIG. 81. CAIRO
Madrasah of Sha'ibān

The mosque of Aṭunbughā (= 'cup-bearer') al-Māridānī, otherwise known as al-Mārdānī or Bughā al-Marda (1339-40), is one of the most elegant in the city. It has been thoroughly restored, but has lost none of its charm thereby. (In fact, Cairo is a city where the much-maligned art of the restorer may be seen at its best.) It is curiously placed at a bend in a narrow street, with the entrance in a small open space forming a slight backwater from the main stream of traffic. Flanking the entrance is the minaret, a lofty octagonal structure on a square base. The façade is of the now familiar type, with rectangular openings (filled with gratings) in the recesses and stalactites above, but the battlements are indented and not foliated like the last example. The interior consists of a principal sanctuary or *liwān* four bays deep, while the remaining *liwānāt* are two bays deep. The open *ṣahn* contains a fountain. A fine screen of *mushrabiyyah* (turned wood lattice) separates the sanctuary from the rest of the mosque. In front of the *miḥrāb* is a dome with stalactites. The whole of the interior is brilliant with marble, mosaic, and gilding. It affords a visitor one of the best examples of a completely equipped mosque of the mameluke period, retaining to a large extent its original beauty.¹

Of minor works of this date in Cairo may be mentioned the entrance doorway of the Bath of the Amīr Bashtāk (1341). Over this doorway is a 'Persian' arch containing a fluted scallop ornament, enclosed in a moulded frame. All this detail is well worthy of study (Fig. 70). Reference was made in Chapter III to the restoration carried out in 1296-7 by Sultan Lājīn in the mosque of Ibn Ṭulūn.

In Palestine and Syria this was a fairly fruitful period architecturally, though not in any way approaching the glories of Cairo. One of the most important surviving examples is the minaret of the 'White Mosque' at Ramleh, commonly known as the 'Tower of the Forty Martyrs'. Built in 1318, this minaret approaches very closely to the form of the Gothic tower, with its angle buttresses terminated with simple weathering, its slight diminution at each stage, and its system of fenestration. None of the Cairo minarets of the early or late mameluke periods has any kinship with this remarkable example (Fig. 77). The adjoining ruins and arcades, too, have little in common with Saracenic work elsewhere.²

I have no authentic information as to the date of the door-head from Damascus illustrated (Fig. 69), but this, too, shows the influence of the Crusaders, and its zigzag mouldings, though probably derived in the first instance from some Oriental source, are first-cousins to the familiar chevrons found on nearly every Norman doorway.

¹ Illustrated in report of Comité for 1905.

² Plan of 'White Mosque' illustrated in *Survey of Western Palestine*, ii. 271-2.

At Jerusalem the Bāb al-Qaṭṭānīn (Fig. 80) leading into the Ḥaram ash-Sharīf from the Cotton Bazaar and several of the *mawāzīn*, or arcades (Fig. 78) of the platform on which the Dome of the Rock stands, are of this period, the former dating from 1327, the latter from 1321. The stalactite treatment of the pointed stone niche over the doorway of the Bāb al-Qaṭṭānīn shows the continual advance being made

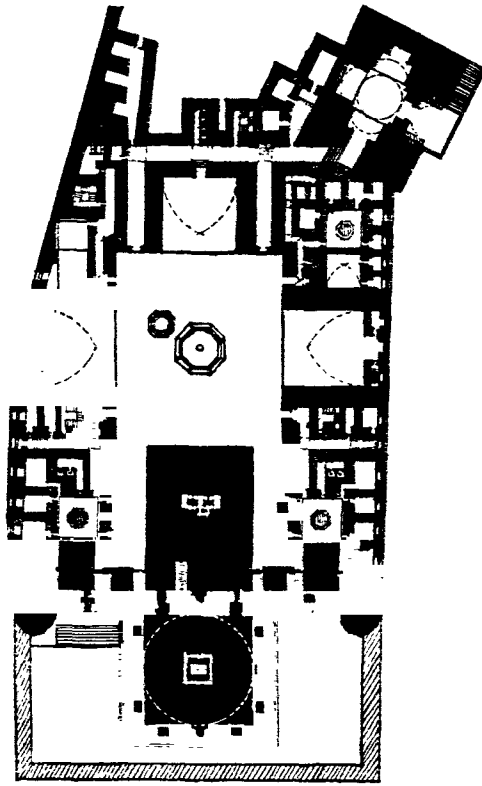


FIG. 84. CAIRO: MADRASAH OF SULTAN ḤASAN. PLAN

in the development of this feature. The chief point to note in the design of the *mawāzīn* is the fluting of the archivolts, recalling the example from Damascus just described. The combination of Corinthian columns, capitals, and bases, with an acutely pointed and stilted arch and a crowning course of stalactites forming a cornice, seems at first sight incapable of producing the graceful and pleasing effect that it undoubtedly does produce. The Ḥaram ash-Sharīf is a perfect museum of Saracenic architecture in all its stages, yet the cumulative effect of the various elements is very fine, and although something must be allowed for the colour of the stone and encaustic tiling, for the cypresses, and even for the green grass mitigating the glare of the sun on the eastern side of the great enclosure, the beauty of the scene owes much to these remarkable *mawāzīn*, which are unique.

The Bāb el-Atām (1321) and the *madrasah* of the Amīr Tankiz (1327) are other buildings of this period in Jerusalem. Other examples in Palestine and Syria are the following:¹ the mosque in the ward of al-Bayāḍah (1310) and that of Alṭunbughā (1318) at Aleppo; the mosque of al-Ḥayyah and the mausoleum of Abu' l-Fidā (c. 1331) at Ḥamā; the Great Mosque (1294), the mausoleum of the Amīr Aybak al-Mawṣili (1298), and the mosques of 'Abd al-Wāḥid al-Maghrabi (1305-6) and Ṭailān (1336) at Tripoli. The Citadel at Aleppo was again restored in 1291-2.

In the seven years (1340-7) elapsing between the death of an-Nāṣir and the accession of Sultan Ḥasan the chief building erected in Cairo was the so-called 'Blue Mosque', more accurately known as the

¹ For these dates I am indebted to Capt. K. A. C. Creswell.

mosque of the Amīr Aqsunqur or of Ibrāhīm Aghā. According to Creswell,¹ the original building was erected in 1346-7, but largely rebuilt under Ibrāhīm Aghā in 1652. It is not therefore a particularly good example of fourteenth-century architecture, but is interesting for the massive octagonal piers in the sanctuary, possibly copied from Gothic examples in Palestine? These probably date from 1346-7, but the beautiful blue tiles lining the sanctuary walls are of Persian or Turkish manufacture, and no older than the seventeenth century. From these tiles it derives its name of the 'Blue Mosque', the only name by which it was known among the amateur guides who conducted parties of unsuspecting soldiers round the sights of Cairo during the war. (See pp. 231-2.)

Other buildings of this period, outside Cairo, are the Qaṣṭal Shabaraq (1345-6) and the Zāwiyat al-Jonashiyyah (1346-7) at Aleppo, and the *madrasah* of al-Jūkandār (1345) at Jerusalem.

But the most important monument of the whole Turkish mamluke period, with the possible exception of the mausoleum of Qalāwūn, is the huge *madrasah* and mausoleum built by—(or more probably during the reign of)—Sultan Ḥasan (Figs. 84, 85, 86, 87, 88, 89, 90, and 199). It was commenced in 1356 and finished, after his death, in

1362-3. It represents the conventional cruciform *madrasah* plan, such as we have already seen in smaller examples, but enlarged to an enormous scale without any increase of complexity. It was typical of the spirit of the age that the sultan was so delighted with the building when it approached completion that he cut off the architect's hand lest that unfortunate official should ever produce a more beautiful monument to rival it. Many stories are told of the vast sums spent on its construction. More authentic is the account of its fortunes during



FIG. 85. CAIRO: MADRASAH OF SULTAN ḤASAN. VIEW OF INTERIOR COURT (*ṣaḥn*)
M.S.B. del.

¹ *Op. cit.*, pp. 102-4.

the Turkish conquest in 1517, when Tūmān Bāy, the last of the mameluke sultans, took refuge beneath its sanctuary from the advancing Ottomans, and when the dome was riddled with holes made by cannon-balls. It again served as a fortress in 1799, when Napoleon contributed further cannon-balls to the decoration of the walls, where they may still be seen embedded. The fortress-like appearance of the building is due both to its colossal height and to its lack of large windows or other features in the great flat wall-surfaces. The whole block is over 500 ft. in length and the height from the pavement outside to the top of the huge stalactite cornice is 113 ft. This cliff of masonry is simply treated with piers and recesses, not unlike the construction of a modern commercial building, and depends entirely on the cornice, consisting of five tiers of stalactites for its effect. But so austere a treatment only acts as a foil to the magnificent portal, surely one of the largest in any country or of any architectural style, which rises sheer from the pavement 66 ft. high, and culminates in a vaulted semi-dome carried on twelve tiers of stalactite pendentives (Fig. 90). (The question of the development of the stalactite will be discussed in detail in Chapter XI.) On two of its remaining sides the mosque has blank walls where other buildings now abut, or once abutted, on it, and the fourth side, facing the Citadel, has no particular merit. The loftier of the two minarets—the highest in Cairo, measuring 280 ft. above the ground, was probably rebuilt in 1671–2, and the smaller one erected at the same time.

But the glory of this great building lies in its austere interior (Fig. 85), with an open *ṣahn* about 100 ft. square, and on each side a *liwān* entered through an immense pointed arch, that on the south being wider than the other three. Round the east *liwān* (Figs. 88 and 199) runs a deep stucco frieze which is perhaps the finest example of ornamental design in all the history of Saracenic art. The angles between the four *liwānāt* are occupied by the collegiate buildings of the four sects of Islam. Through doors on either side of the *mihrāb* in the principal *liwān* one enters the tomb-chamber, a square domed structure richly decorated with wood and plaster ornament coloured and gilt. This mosque has been restored at a cost of over £20,000, and to appreciate its many features one must read the monograph in which Herz Bey describes both it and its restoration.¹

In the remaining years of the Turkish mameluke period many other interesting mosques, which space does not allow me to describe in detail here, were erected in Cairo, including the mosque of the Amīr Shaykhū (1349); the *madrasah* and mausoleum of the same *amīr* (1355), the *madrasah* and mausoleum of the Amīr Ṣargitmish (1356), the *madrasah* and mausoleum of Sultan Sha'bān (1368–9), and the

¹ See bibliography.

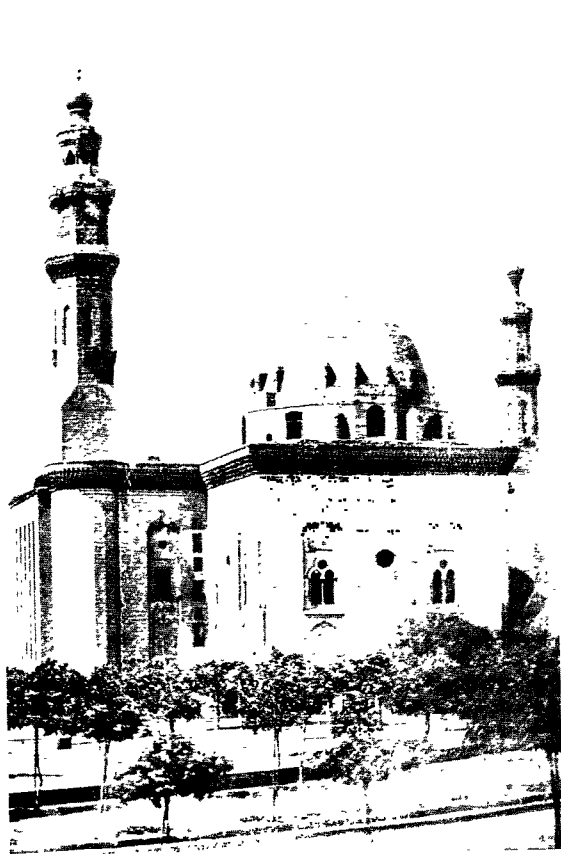


FIG 86 EXTERIOR

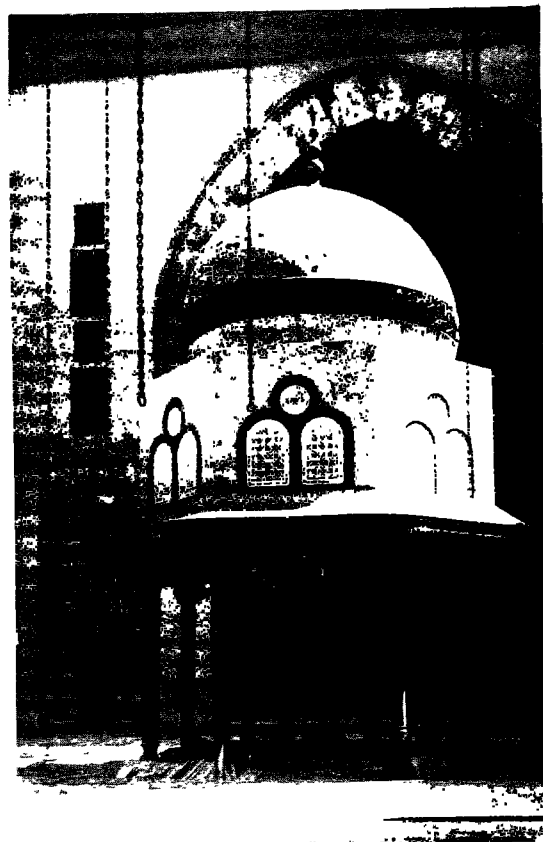


FIG 87 INTERIOR COURT

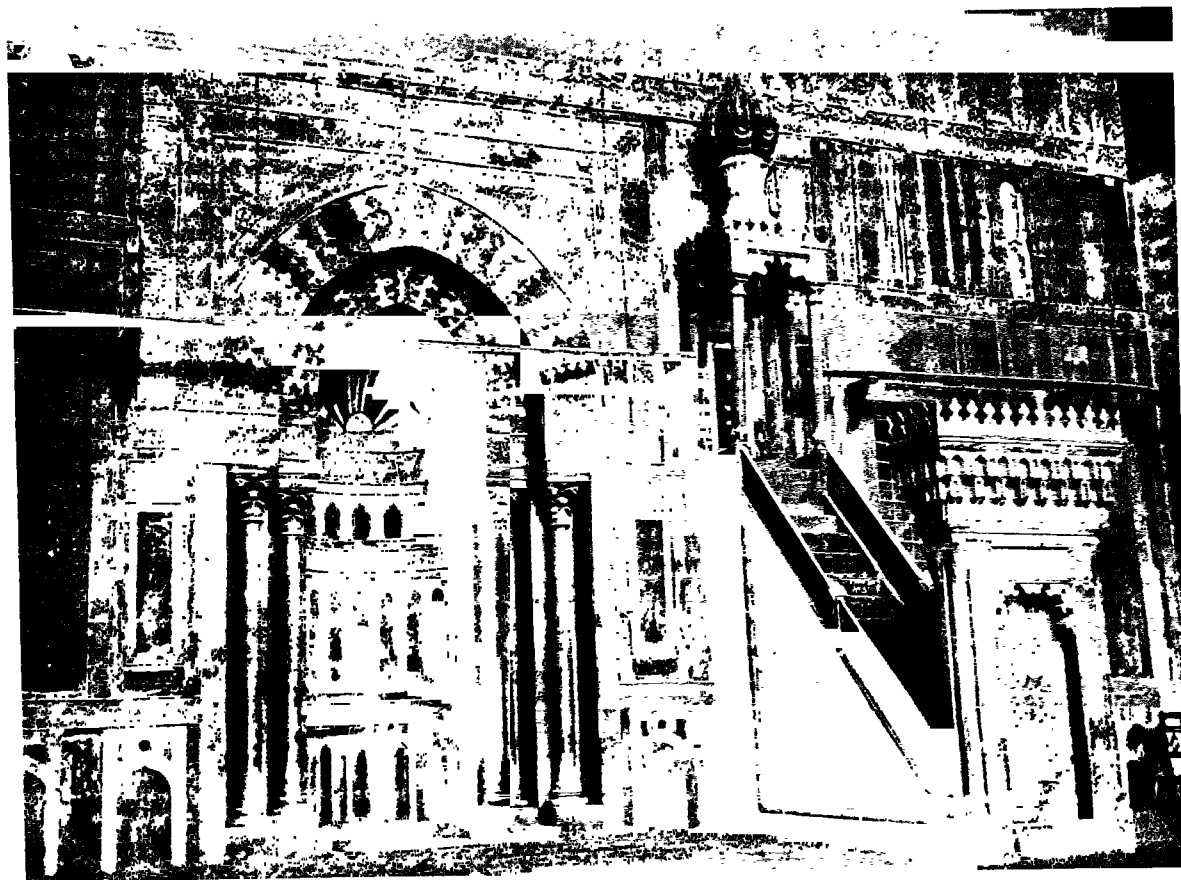


FIG 88 MIHRĀB AND MIMBAR

FIGS. 86-8. CAIRO : MADRASAH OF SULTAN ḤASAN

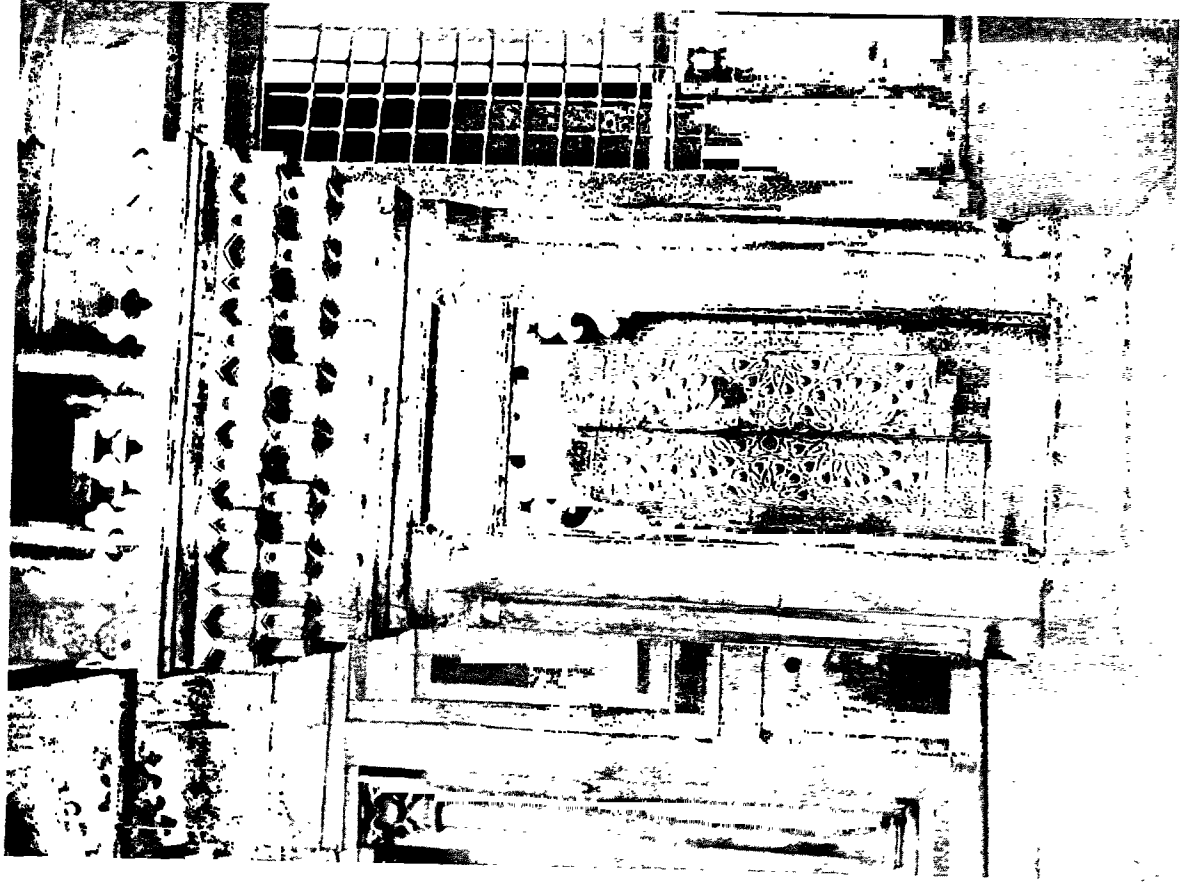
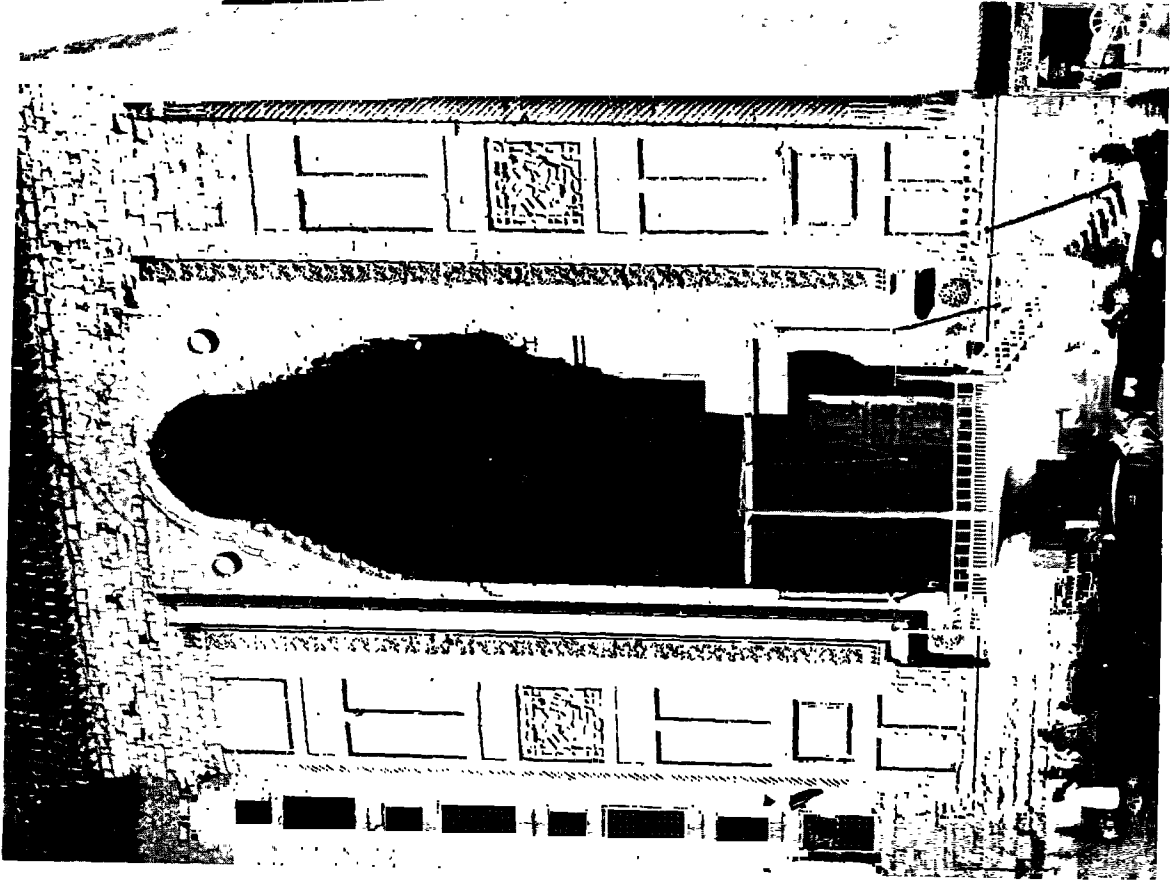


FIG. 89. Doorway in sanctuary



CAIRO : MADRASAH OF SULTAN HASAN

FIG. 90. Portal

madrasah of the Amīr Al-jāy al-Yūsufī (1373); while in Palestine and Syria may be mentioned the mosque of Manglibughā (1365-6), and the Qastal Sakākīnī (1374-5), at Aleppo; the *madrasah* Kāmiliyyah in Firdaus, a suburb of Aleppo; the mosque of al-Aṭṭār (1350), and the *madrasahs* of al-‘Ajamiyyah (1365) and al-Khātūniyyah (1373-4) at Tripoli; the *madrasahs* of Argūn Kāmīlī (1357) and al-Keziya (1361) at Jerusalem.¹

The century and a half of Turkish mameluke architecture shows a great advance on the buildings of the Fāṭimids and of Saladin’s time. Both the façades and the interiors of mosques are now treated as a definite design, where grouping and massing are of recognized importance. The minaret becomes a graceful tower, the external walls are no longer bare stretches of stone. The parapet breaks into foliation, the stalactite is used with fanciful ingenuity in every possible position. Delicate bands of carved ornament formed of Kufic characters interlaced with foliage are used as friezes and string-courses, while all branches of craftsmanship, as we shall see in the later chapters of this book, reach a high level of attainment.

BIBLIOGRAPHY FOR CHAPTER VI

- Watson, Major C. M. The mosque of Sultan Nasir Mohammed ebn Kalaun (in *Journal Roy. Asiatic Society*). London, 1886.
 Herz Pāshā, Max. Die Baugruppe des Sultans Qalaun in Kairo (in *Abhandlungen des Hamburgischen Kolonialinstituts*). Hamburg, 1919.
 Herz Bey, M. *La mosquée du Sultan Hassan au Caire*. Le Caire, 1900.
 Muir, Sir W. *The Mameluke or Slave Dynasty of Egypt, 1260-1517*. London, 1896.
 Maqrīzī. *Histoire des sultans mamelouks*. Translated by Quatremère. Paris, 1837-45.
 Also references in general works cited on pp. 18, 19.

¹ For these dates I am indebted to Capt. K. A. C. Creswell.

VII

THE BUILDINGS OF THE CIRCASSIAN MAMELUKES

(1382-1517)

THE division of the 'mameluke period' of Saracenic architecture in Egypt and Palestine into two nearly equal portions, according to the accepted historical demarcation, is a convenient way of treating a long list of important buildings that would otherwise be unwieldy by reason of their number. But there is no sharp line drawn, either historically or architecturally, at the year 1382, when the succession of 'Turkish or 'Bahrite' mamelukes gave place to another line known in general as Circassian or 'Burjite' mamelukes. There is some little doubt as to the origin of their popular Arabic name. It may be derived, as is commonly supposed, from their habitual quarters in the Citadel (*Burj*) of Cairo, or, as Herz Bey suggests,¹ because 'they were principally occupied by their masters in the defence of fortresses'. The name is, however, of no importance whatever. Social conditions in the second period closely resembled those prevailing in the first, while architecture progressed steadily on the lines it had followed since the time of Baybars, gaining only in unity, grace, and splendour.

Cairo continued to be by far the most important city of the Saracen empire. Aleppo furnishes us with a certain number of monuments of the period, a few other Syrian cities add to the list, and Jerusalem still possesses some small examples of great beauty. But with the latter exception, nothing in Syria compares even in quality with the buildings of the capital, and in quantity Cairo has ten mameluke mosques of note for all other parts of the empire put together. It is, then, with Cairo that this chapter will be chiefly concerned.

The city had now greatly extended its boundaries since the days of Saladin. It was limited on the east by the rugged scarps of the Muqattam Hills, on which the mosque of al-Juyūshī still stood as solitary as it did in the eleventh century. But it spread northwards and westwards, from the old Fātimid wall towards the new port of Būlāq, and even beyond, where the convenient shipwreck of a boat in the Nile had altered the course of the river and thus formed a sandbank which became a building-site in due course.² On the north-east of the city, on the desert, there came into being the great Eastern Cemetery

¹ Herz Bey, *Descriptive Catalogue of the Arab Museum*, p. xlv.

² See the excellent map in Lane-Poole's *Cairo*, p. 256.

or *Qarāfah*, more familiarly known to English soldiers and tourists under the misleading and erroneous name of the 'Tombs of the Caliphs', and by yet another name—(only a little nearer accuracy)—as the Cemetery of Qāyt-Bāy. Here there rose from the sands a succession of wonderful tomb-mosques, from the end of the fourteenth century onwards, that out-rivalled even the splendid buildings erected by the Circassian mamelukes within the city. It was my good fortune, for the latter months of the war, to be camped on a spur of the Jabal Aḥmar at a point where a magnificent panorama of Delta and desert was visible, but to me the most wonderful feature in all that vast prospect was the marvellous silhouette of domes and minarets at sunset, formed by the 'Tombs of the Caliphs'. Here, even more than in the fascinating bazaars of the city perhaps, one learned to appreciate the charm of mameluke architecture, in these richly-ornamented mausolea where the dead sultans lay. Scattered over a considerable area, the tombs number more than twenty, of which nine are tomb-mosques, and of the latter five are sultans' tombs. The remainder are the mausolea of the sons, daughters, or wives of the sultans, or the tombs of prominent amīrs. Several of these buildings will be described later in this chapter.

South of Cairo, going towards the great mosque of the Imām ash-Shāfi'ī, lies another great mediaeval cemetery, commonly called the 'Tombs of the Mamelukes'. (This name might with equal accuracy be applied to the Eastern cemetery.) Although dating from the same period as the latter, the tombs in this cemetery are of less importance architecturally, and are, moreover, in a far more ruinous condition, having been used for centuries as a quarry. In all architectural periods, even in remote antiquity, the buildings of Cairo have suffered severely from this method of spoliation. In the mosques one finds not only innumerable marble columns stripped from Christian churches, but even blocks of polished granite bearing hieroglyphs. The Pyramids were robbed for stone for the Citadel as well as for religious buildings, and marble slabs were obtained from ancient churches or temples. Small wonder then that the Turks in their turn destroyed many master-pieces of their Arab predecessors.

To an architectural student endeavouring to create in his mind the appropriate atmosphere for the art of the mamelukes there is nothing in history so illuminating as the statement made by Professor Lane-Poole, that Cairo and not Baghdād is the scene of the 'Arabian Nights'. Though this famous series of tales no doubt had its origin long before in Persia and India, the stories are now believed to depend on Egypt for their present form and for local colour.

'There are incidental touches that make it probable that the Arabian Nights assumed their present form, in all essentials, before

the middle of the fourteenth century. The latest historical personage mentioned is Saladin, and there are many reasons for believing that the tales were collected and written very nearly in their final shape during the revival of letters that ennobled the golden age of mameluke civilization on the Nile. The society they describe is precisely what we know of mameluke times; it is orthodox Muslim society of the Cairene type.¹

Nothing is more inexplicable in this period than the acute contrast between the cruelty of most of the mameluke sultans and their generous patronage of architecture. In this respect, all that I have said in the previous chapter applies with equal force to the second period. Nor was the fifteenth century in any sense favourable to the progress of any of the arts, except where encouraged by a despot. The sultan was, more than ever, only the principal *amīr*, and held his throne against his rivals by a combination of brutality, bribery, and cunning. So of the twenty-three rulers who occupied the throne during 135 years, eight only are of any importance to us, for the remaining fifteen between them only reigned some twelve years. Something must be said of these eight principal sultans, for they took a very personal interest in their building, and as their chief monuments were tomb-mosques, it is the name of the sultan or *amīr*, not of his architect, that goes down to history.

Cairo was not only the religious and political capital of the Muhammadan world, but also the chief centre for its trade. It then occupied much the same position on the world's commercial highway between Europe and Asia that the Suez Canal does to-day. All the rich materials that came from Persia, India, and beyond, were transhipped at Suez, Suakin, or some smaller Red Sea port, taxed by the customs' officials of the sultan, and then loaded on to Pisan or Genoese or Venetian ships at Alexandria or Rosetta or Damietta. There was thus a constant succession of caravans passing across the Arabian Desert to Cairo, where rich cargoes were loaded on to the picturesque Nile boats at the quays of Būlāq. The sultans concluded treaties with the great powers of Europe, and one may find frequent cases of Saracen craftsmen working in Venice and other Italian cities, and vice versa. The *funduq* or warehouse of the Eastern merchants is surely recalled in the *fondaco dei Turchi* on the Grand Canal in Venice.

In later chapters of this book, the domestic architecture of the Saracens, as well as their skill in all branches of craftsmanship, will be described in detail. It is sufficient at this point to mention that though the mosque, and especially the tomb-mosque, was the special feature of later mameluke architecture, all classes of building—mosques,

¹ Lane-Poole, *Cairo*, p. 261.



FIG. 91. CAIRO : MAUSOLEUM OF BAYBARS II

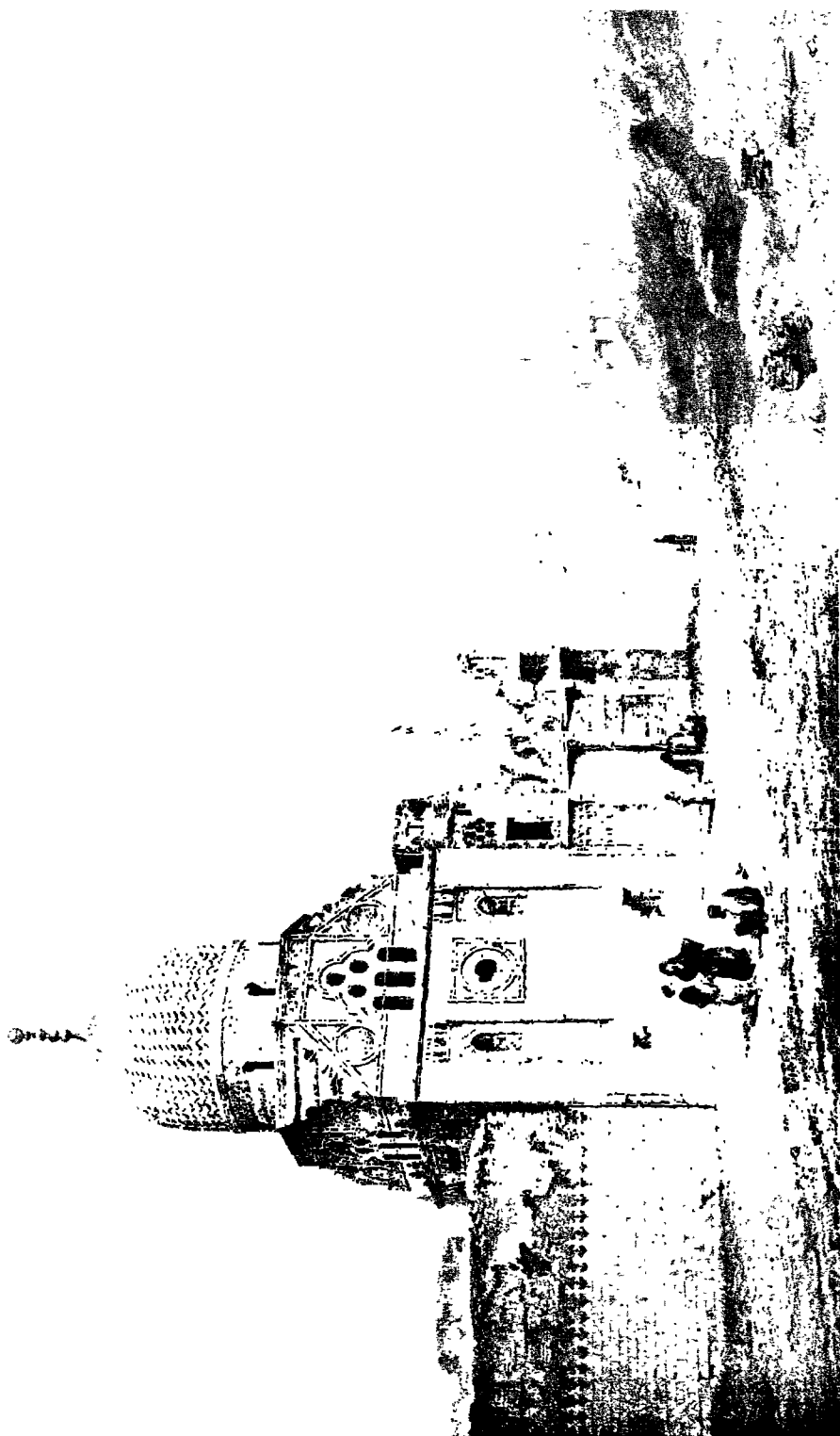


FIG. 92. CAIRO : MAUSOLEUM OF THE AMIR TARĀ-BAY

palaces, houses, khāns or warehouses, baths, fountains—were erected with an abundance of elaboration and good taste unknown in previous periods. In spite of political unrest and constant wars, Cairo continued to be one of the most luxurious cities of the world. But the discovery of the Cape route by the Portuguese marked the beginning of her decline, and the Turkish conquest in 1517 was the end of her greatness.

Throughout this period Syria and Palestine formed part of the Saracen dominions, though under Tamerlane these provinces were invaded in 1400. Both Aleppo and Damascus suffered severely at his hands, especially the latter, which was partly destroyed by fire, in which a large number of the inhabitants perished. From this blow the city recovered very slowly and long felt the effects. Aleppo under the Mamelukes was constantly the scene of faction-fighting, but had a prosperous commercial existence under the succeeding régime of the Turks. Jerusalem after the time of Saladin had no history, an evidence of happiness or of stagnation according to one's interpretation of the fact.

The first of the Circassian sultans was Barqūq (1382–99), who reached the throne by the convenient stepping-stone of a regency. His reign opened with a rebellion in Northern Syria, where the Governor of Aleppo, among others, joined with Turks and Mongols in an attempt to shake off the authority of Egypt. Beginning with a defeat of the Egyptians near Damascus, we next hear of an artillery duel in Cairo between one faction on the roof of Sultan Hasan's mosque and another on the opposite height of the Citadel, and then a counterstroke in which Barqūq was successful. In spite of his cruelty on many occasions, he was a great patron of the arts. His principal building in Cairo is the beautiful *madrāsah* in the Sharia an-Nahḥāsīn. The great convent and mausoleum bearing his name in the Eastern Cemetery was built by his son Faraj to contain the tombs of both.

Faraj (1399–1412) was thirteen when he succeeded his father, and thus only a young man when he was deposed and murdered. He was dissolute in his private life, and regarded as a coward in battle. In 1401 Damascus and much of Syria was ravaged by Tamerlane, a fact accounting for the comparative scarcity of Saracenic buildings in many of the chief Syrian cities. Yet in spite of his inglorious record Faraj's great building in the Eastern Cemetery is one of the chief monuments of Muhammadan art.

The next sultan of importance was al-Mu'ayyad Shaykh (1412–21), who, although he was a man of studious habits and interested in the encouragement of architecture, was chiefly occupied in restoring order on his northern frontier. The chief building of his reign is the fine mosque bearing his name in Cairo.

After three reigns lasting only fourteen months in all, Bārs-Bāy (1422-38) ascended the throne. His period of rule is remarkable for the Egyptian conquest of Cyprus from its Norman king. The island remained in the hands of the Mamelukes until they themselves were conquered by the Turks, in 1517. Unsuccessful attempts were also made by the Egyptians in 1440-4 to annex the island of Rhodes. During the reign of Bārs-Bāy several noteworthy mosques were built in Cairo and in other cities.

His successor, Jaqmaq (1438-53), though he reigned for fifteen years,

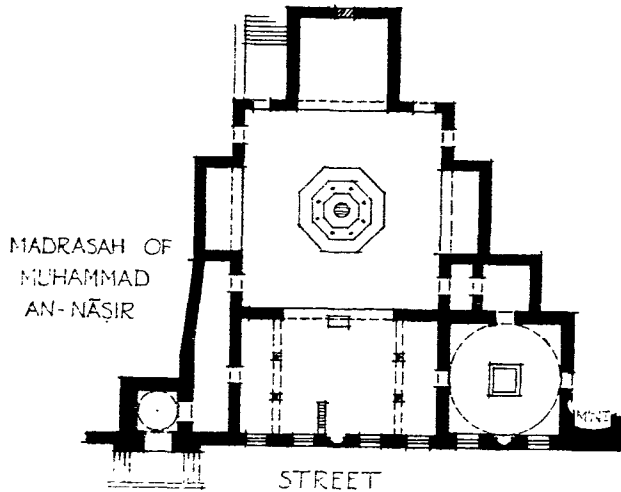


FIG. 93. CAIRO: MADRASAH OF BARQŪQ (*intra muros*). SKETCH-PLAN

has left no mark on history, chiefly because he appears to have been a reasonable man of virtuous habits. He was an old man when he became sultan, and, though of religious character, he preferred the persecution of Christians and Jews to the building of mosques, and has left us few monuments of outstanding merits.

Ināl, the next sultan (1453-61, if one ignores a six weeks' interval between these dates), was also an old man, whose energies must have been spent

in the erection of a huge convent and mosque in the Eastern Cemetery, the principal building of his short reign.

Then followed several brief reigns, of no importance to a historian of architecture, and in 1468 Qāyt-Bāy ascended the throne. He ruled Egypt until his death in 1496, for a longer period than any sultan since Qalāwūn. Without exception, he was the greatest builder of any of the mediaeval rulers of Egypt and Syria. Bought for twenty-five guineas in early life by Bārs-Bāy, he owed his success to a brilliant military career. Towards the end of his reign the power of the Turks, established in Constantinople in 1453, became a real menace to the existence of Egypt. Qāyt-Bāy resembled many of his mameluke predecessors. He had a powerful will and great ability. Stories are told of his physical strength that make him appear an Admirable Crichton. He taxed his subjects, especially rich Jews and Christians, with remorseless severity, but he devoted a very large part of the proceeds to erecting a truly marvellous series of buildings, in which Saracenic architecture appears in its most refined and graceful aspect.

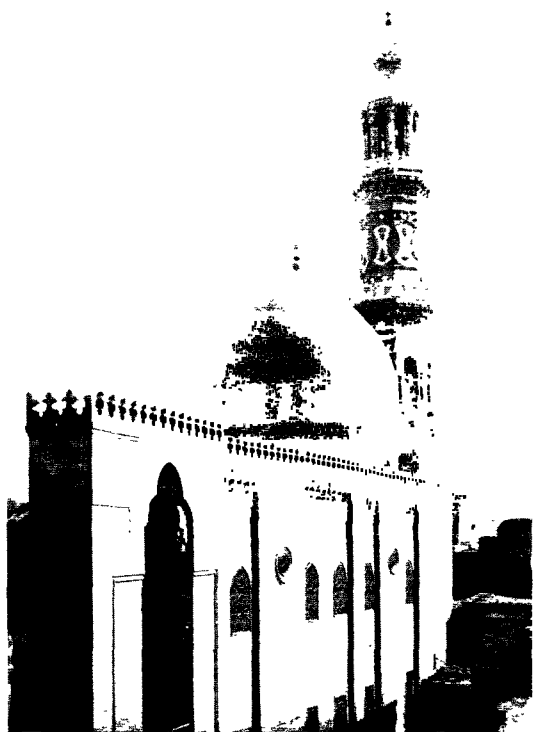


FIG. 94. EXTERIOR



FIG. 95. INTERIOR

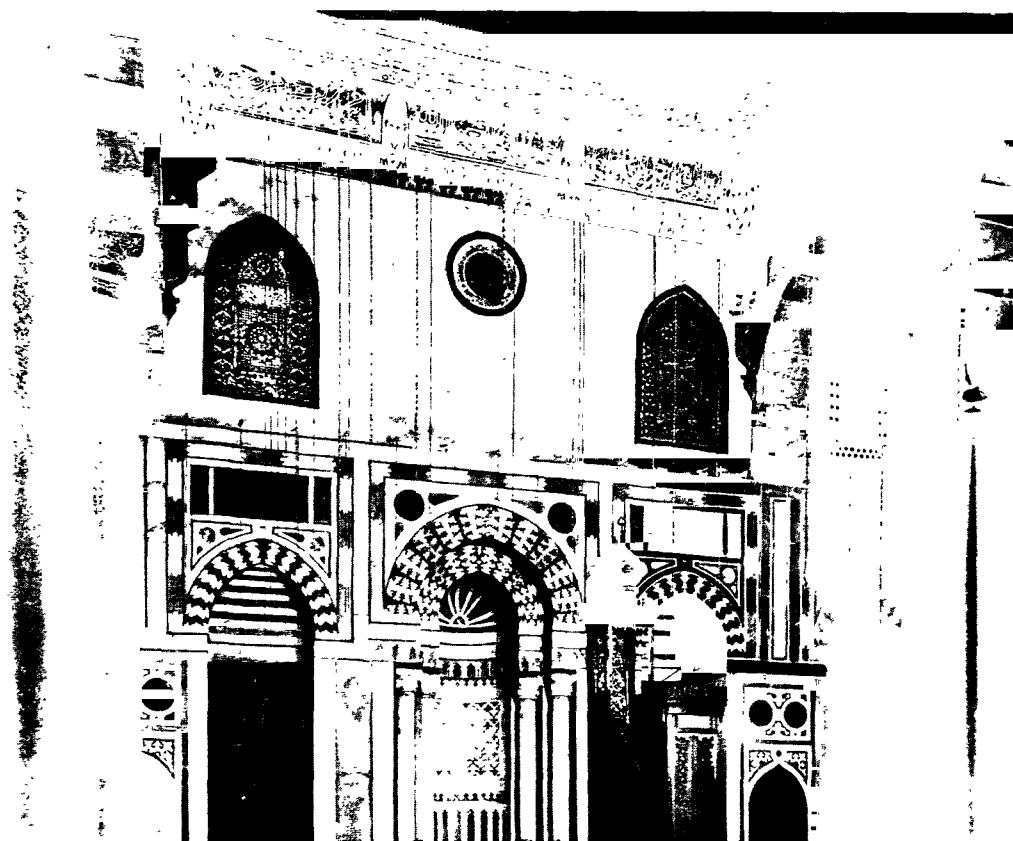


FIG. 96. DETAILS OF SANCTUARY

FIGS. 94-6. MADRASAH OF BARQUQ (*intus muros*)



FIG 97. EXTERIOR FROM THE EAST



FIG 98. DOME IN MAUSOLEUM



FIG 99. ARCADES IN WEST LĪWĀN

FIGS. 97-9. CAIRO. MAUSOLEUM OF BARQŪQ AND FARAJ (*extra muros*)

Four more nonentities followed him, and then in 1501 the last real ruler of Egypt, the Sultan Qansūh al-Ghūrī, was chosen. He forced a large revenue out of the country by excessive taxation, and emulated his predecessor in the number, splendour, and beauty of his buildings. But Egypt was doomed. The Portuguese had robbed her of her great trade monopoly between East and West, and in 1516 the sultan had to march from Cairo into Syria to meet the advancing Turks. His army was totally defeated north of Aleppo on the 24th of August, and he himself was killed. In January 1517 the Egyptians were utterly defeated at Heliopolis, four days later the Turkish sultan Salīm marched into Cairo, and in April Ṭumān-Bāy, the last of the mamluke rulers of Egypt, was hanged at the Bāb Zuwaylah. Thus ended the great architectural period of the Circassian mamlukes and after this date the buildings erected under Turkish rule declined in quality as they decreased in number.

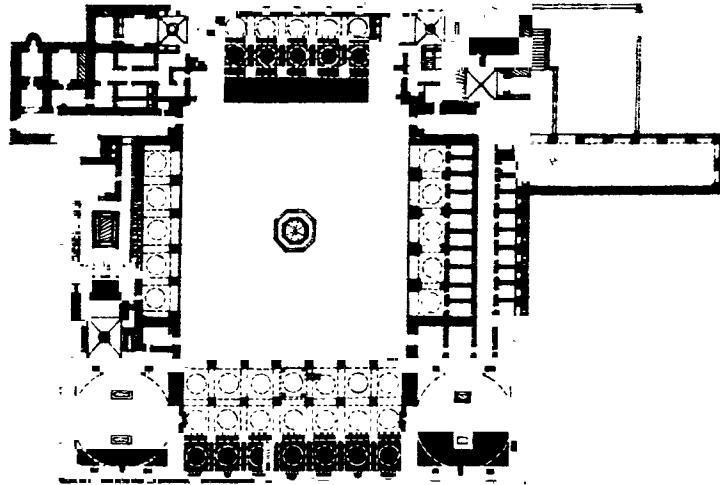


FIG. 100. CAIRO: MAUSOLEUM OF BARQŪQ AND FARAJ
(extra muros). PLAN

After a period of many centuries of greatness and prosperity, Cairo sank to the level of a provincial centre, and took her instructions for architectural style and everything else from Constantinople. How this great change affected her buildings will be revealed in the next chapter.

Returning to the beginning of the period of the Circassian mamlukes in order to examine their principal mosques in detail, we find that they were erected for the most part in Cairo. Here the sultan Barqūq built his great *madrasah* and mausoleum (1384-6) adjoining those of Qalāwūn and an-Nāṣir, thus completing the finest architectural group in the city (Figs. 93, 94, 95, and 96). The mosque has been completely but admirably restored by Herz Bey. It consists of a cruciform *madrasah*, but the sizes of the four *liwānāt* vary considerably. The south or principal *liwān*, containing the *mihrāb* (which is in the wall nearest to the street) is much deeper than the others, and has aisles on east and west, separated from the *liwān* by two large antique columns of porphyry on either side. These columns have curious capitals of a clumsy type. The north *liwān* is larger than those on east and west.

The south *liwān* has a gorgeously decorated flat ceiling, the other three have pointed vaults less flamboyant in character. The square open *ṣaḥn* contains a beautiful fountain, with a domed top resting on slender columns. This dates from the Turkish period and has been restored. In the sanctuary stands a white marble *dikkah* of modern workmanship. All the decorations and accessories of this building are admirable, and have lost nothing through judicious restoration. But on the whole the most important architectural feature of the *madrasah* interior is the great horseshoe arch of the sanctuary, acutely pointed, and springing from a point comparatively near the floor-level.

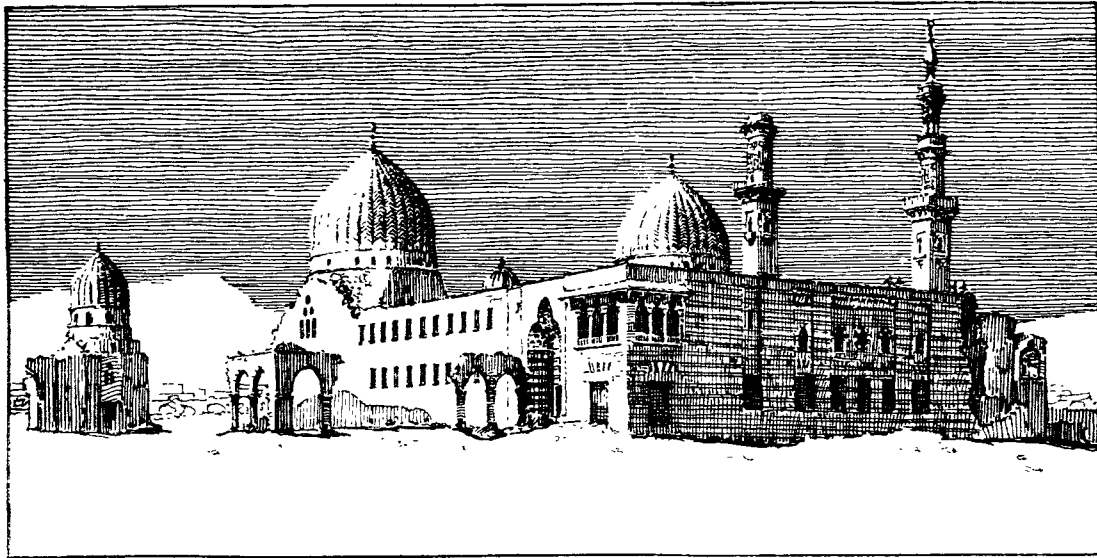


FIG. 101. CAIRO : MAUSOLEUM OF BARQŪQ AND FARAJ (*extra muros*).
M.S.B. del.

In all these mosques there is a high step up from the *ṣaḥn* into each of the *liwānāt*, usually measuring nine inches or more. Alternate courses of red and white stone are used in the walls and voussoirs. The plan (Fig. 93) shows that axial lines were now being regarded as important by the mameluke architects. The disposition of doors round the *ṣaḥn* is almost invariable in these *madrasah* plans, there being one on each side of the *liwān* arch. The angles of the site, between the *liwānāt*, were usually occupied by the minor rooms of the establishment, but in this case the south-east angle is occupied by a domed tomb-chamber, the mausoleum of Barqūq's daughter, east of which rises the lofty minaret. This mausoleum is as richly decorated as the rest of the building with marbles, carving, gilding, and stained glass. The dome has stalactites. In contrast with the boldness of the remainder of the plan is the arrangement of the entrance. This is contrived like the entrance



FIG. 102. CAIRO : MOSQUE OF MU'AYYAD. COURT



FIG. 103. CAIRO . MOSQUE OF MU'AYYAD. SANCTUARY OR PRINCIPAL LĪWĀN

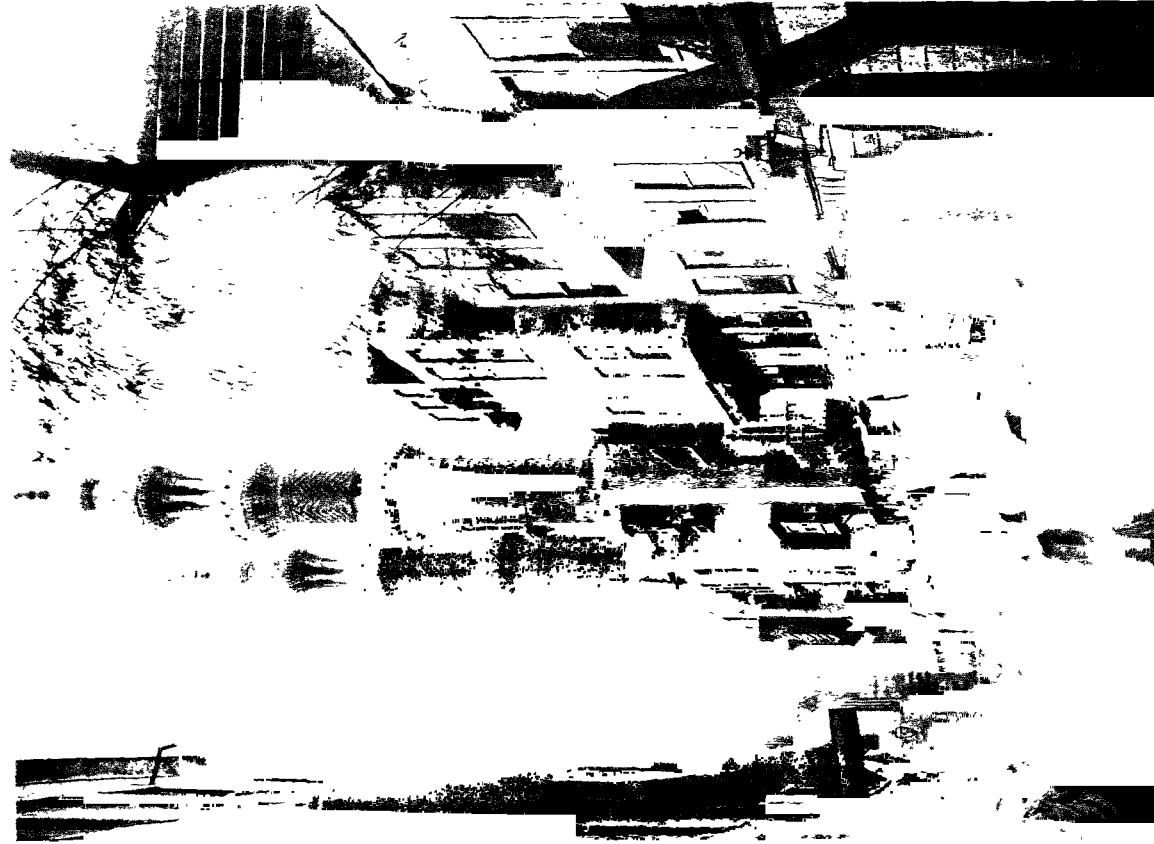


FIG. 104. CAIRO : MOSQUE OF MU'AYYAD
Minarets

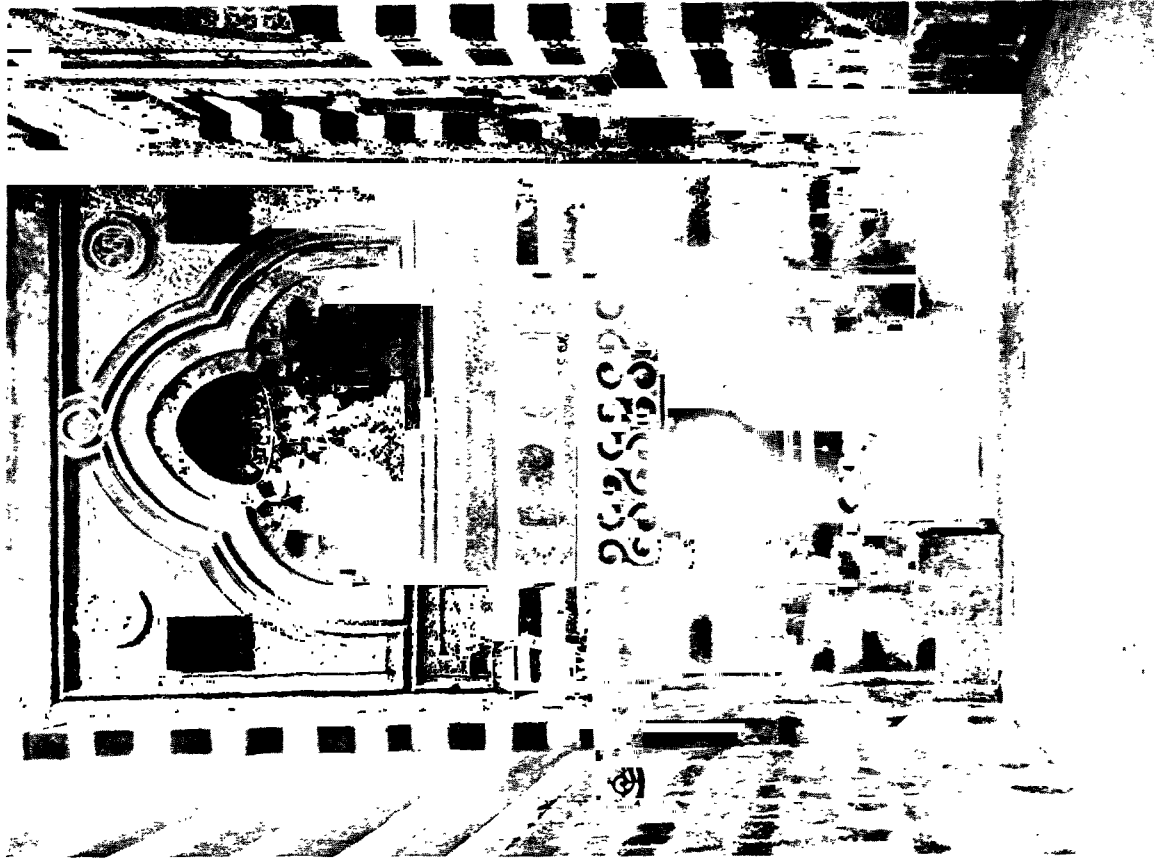


FIG. 105. CAIRO : MOSQUE OF AL-AZHAR
The Bāb Al-Muzayminin (' Barbers' Gate')

to a private house (see Chapter IX) or the gateway in a city-wall, the object in each case being to prevent intrusion,—in the one case by the unbidden visitor, in the other case by hostile soldiers. But the reason for privacy in the entrance to a mosque is less apparent. From the street one ascends a double flight of marble steps, now a usual feature for mosques standing in crowded thoroughfares, under a magnificent portal containing doors covered with bronze and silver ornamentation, into a domed porch. Here one turns sharply to the right into a corridor, from which one door leads into the west aisle of the sanctuary, and another into the *ṣaḥn*. The exterior of this mosque, of 'Barqūq *intra muros*' as it is generally known, to distinguish it from the great mausoleum of the same name in the Eastern Cemetery, is treated with recesses and stalactites above (as in other examples described), crowned by a foliated cornice. There is no feature of special interest about the dome. The minaret, while not equalling the grace of Qāyt-Bāy's masterpieces, gives an earnest of the glories that were to follow a century later or less.

Minor mosques of Barqūq's reign include the mausoleum of the Amīr Yūnus ad-Dawādār (1382), commonly called the 'Tomb of Monsi', near the Citadel at Cairo; the curious ruined mosque (Fig. 107) built by the same *amīr* at Khān Yūnus (a village near Gaza that was very familiar to the army in the first Gaza campaign early in 1917); the Zāwiyah of Shaykh Muḥammad al-Bazzāzī (1388) at Aleppo; and the Qubbāt as-Sa'dayn (1399) at Baalbek.

But even more familiar than Barqūq's mosque within the walls of Cairo is the huge convent (*Khānqāh*) and mausoleum built over the twin tombs of himself and his three wives by his son Faraj in 1400–10 (Figs. 97, 98, 99, 100, 101, 106, 218, and 249). This great square block lies in the northern part of the Eastern Cemetery, and is, fortunately, usually included in the itinerary of visitors to Cairo. It is symmetrically planned, with two graceful minarets on the north-west side, where the entrance is placed, and two domes flanking the south-east or sanctuary façade towards the cliffs of the Muqāṭṭam. Commonly known as 'the mosque of Barqūq *extra muros*', the building possesses many important features to the student of architecture. It is said to have been planned by an architect, Sharka al-Haranbuli. In general arrangement it forms a striking combination of the congregational mosque (*jāmi'*) with the collegiate mosque (*madrasah*). At first glance it would appear to be a later instance of the former type, of which the last example was built by Sultan Baybars.¹ There is a very large square *ṣaḥn* surrounded by arcades with pointed arches. But a more careful examination of the plan shows that the group consists of a *ṣaḥn* and four *liwānāt* forming

¹ See p. 96.

a cross which is surrounded by a square. The north-east and south-east angles between the cross and the square are occupied by the domed tomb-chambers ; the opposite angles, and the space between

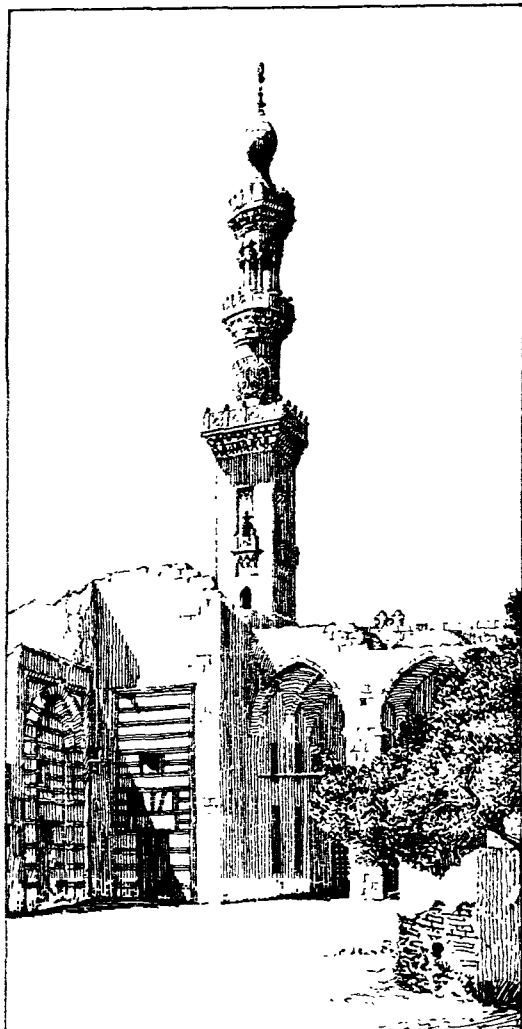


FIG. 106. CAIRO: MAUSOLEUM OF BARQŪQ AND FARAJ (*extra muros*). COURT (ṢAḤN) AND MINARET. M.S.B. del.

the shallow *liwānāt* on the north-east and south-west of the *ṣahn* and the external walls are filled with conventual offices. Outside the square were other buildings, now ruined, extending north-east. These comprised an arcaded hall connecting the main block with the small domed tomb of Barqūq's father, Sharaf ad-Dīn Anas. At the angle where this wing joined the mosque was originally the chief entrance, still existing, and next to it a *sabīl* or fountain-chamber, over which stands an arcaded *kuttāb*, or boys' school. These two buildings are constantly found in combination from this date onwards. Placed very often at the angle of a mosque (as in this case), or adjoining a mosque, or standing quite detached at the angle of a busy thoroughfare, they form attractive features in many a Cairo street-scene. Their use was continued through Turkish times, to the eighteenth century or even later, when mosque-architecture had declined. The *liwānāt* are not roofed with timber beams, as in the earlier congregational mosques, but with hemispherical domes carried on pointed and stilted arches.

The latter are supported on plain octagonal stone piers. The transition from the octagonal plan of the piers to the square plan of the arch over is contrived by a form of 'stop-chamfer', to borrow a modern joiner's term. But for this detail, there is something very reminiscent of the Crusaders in the effect of these arcades. The two massive domes over the tombs at each end of the sanctuary are similar in appearance though built at dates a few years apart. Their external surfaces are covered with a convex chevron pattern. The method of changing from the

square plan of the substructure to the circular drum of the dome is interesting, but not particularly graceful. It would be very unsuitable for a European climate, as large surfaces of stone are presented to the weather at an angle which would not exclude moisture. Internally stalactite-pendentives are used (Fig. 98). Over the *mihrāb* is a smaller dome, with vertical convex flutings externally. One of the two minarets has been restored recently, the other lacks the topmost stage. The

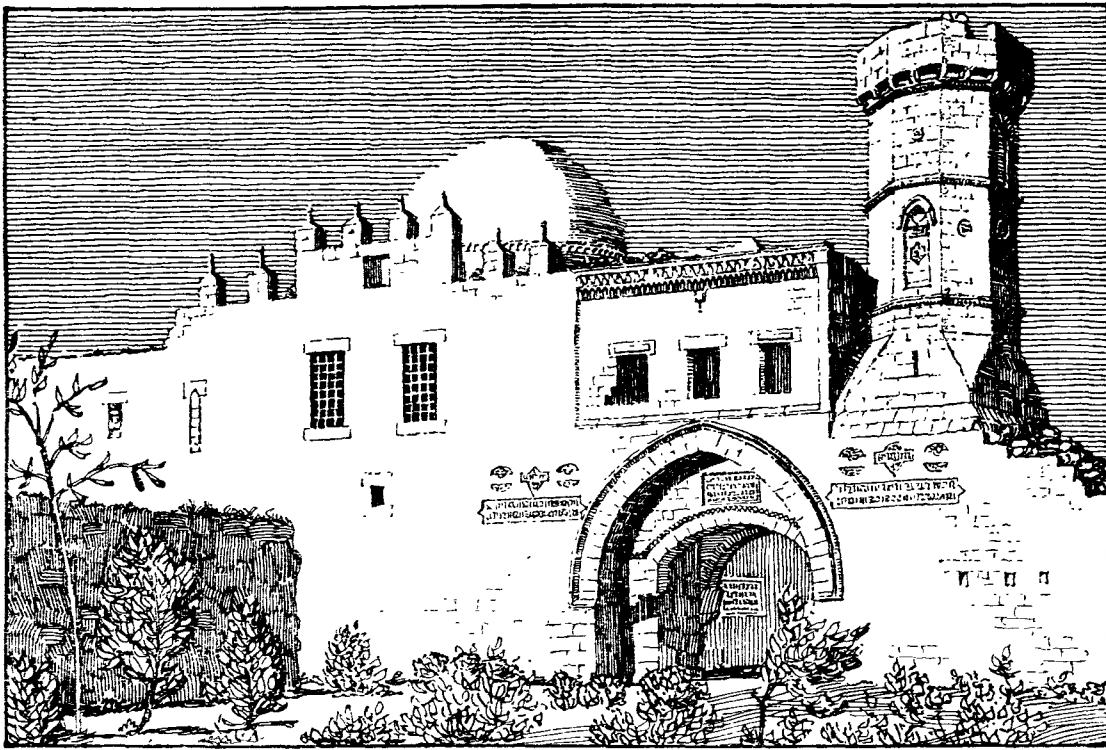


FIG. 107. KHĀN YŪNUS, NEAR GAZA. RUINED MOSQUE OF THE AMĪR YŪNUS AD-DAWĀDĀR. M.S.B. del.

grouping of these two minarets, the two large domes, and the small one between them, is masterly, forming a magnificent silhouette. Within the mosque the most interesting feature is the beautiful pierced wooden screen¹ between the sanctuary and the chamber containing Barqūq's tomb. The latter too is a fine specimen of a Saracenic tomb, and the stone *mimbar* or pulpit merits careful examination. In the *ṣahn* the old *hanafiyyah* (fountain for ablutions) still remains.

Faraj built another mosque just outside the Bāb Zuwaylah, a small *madrasah* erected about the year 1409. The façade is of no great interest

¹ Illustrated from a fine photograph by Capt. Creswell in Mrs. Devonshire's *Rambles in Cairo*.

and is covered with shops. Both within and without the building is sadly in need of restoration. Other Cairo mosques of this reign are those of the Amīr Jamāl ad-Dīn Yūsuf al-Ustādār (1408) nearly opposite the *madrasah* of Baybars al-Jāshankīr, and of al-‘Aynī (1411), a small *madrasah* and mausoleum near al-Azhar. The mosque of al-‘Aynī contains a remarkable *mihrāb* lined with tiles¹ and a graceful dome carried on carved wooden stalactite pendentives.²

Faraj’s successor, the sultan al-Malik al-Mu’ayyad Shaykh (1412–21) has left us one great mosque³ bearing his own name in Cairo, adjoining the Bāb Zuwaylah, indeed the two lofty minarets stand on the two Fātimid towers flanking that ancient gateway. This mosque (1415–20) has been extensively restored, and a large part of it, as we now see it, is modern (Figs. 102, 103, and 104). It is what would be called in Christian countries a ‘votive’ building, for the future sultan, when confined in a prison on the same site, vowed that he would erect a mosque there if ever he escaped from his sufferings. The original portion of the building is the principal *liwān* or sanctuary, abutting on the Sharia Sukkariyyah (Fig. 103). The upper portion of both the two beautiful minarets is modern. The palm-trees in the large *ṣahn* of this mosque are an unusual and attractive feature. But the building as a whole depends for its importance chiefly on the very high level of craftsmanship displayed in its decorative accessories,—the marble dado of the sanctuary and the marble of the *mihrāb*, the carved and coloured woodwork of the stalactited ceiling, the wonderful entrance doors 20 ft. high (brought here from the mosque of Sultan Ḥasan), the richly-sculptured portal, the gorgeous inlaid wood pulpit and doors, the interior of the mausoleum (with its dome on stalactites), and the simple but delicate design of the wooden railing surrounding the tomb. It is interesting to see that in so late an example use is made of antique marble columns with their capitals, reminding us that the godly Shaykh was something of a bigot in regard to Christians and their churches. Externally the façade follows the now traditional lines, with recesses between piers, rows of stalactites above the recesses, a foliated parapet running the whole length of the front, courses of red and white stone in alternate courses, and a flight of steps up to the prominent entrance. Less familiar is the use of engaged shafts, spirally fluted, with caps and bases, at the external angles. This practice was common in Italy in the Middle Ages.

In the reign of Bārs-Bāy (1422–38), though no monument was erected comparable in size or importance with that just described, a number of mosques were built in Cairo and elsewhere. The sultan’s

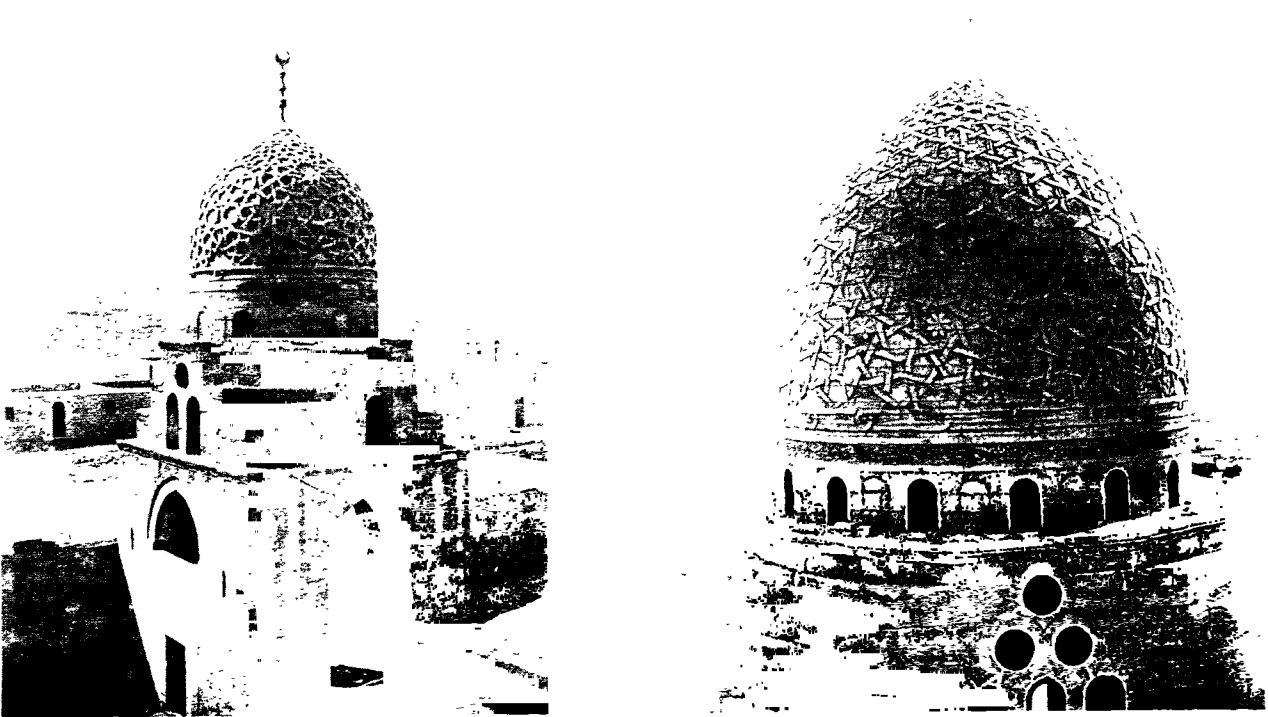
¹ See Capt. Creswell’s photograph in Mrs. Devonshire’s *Rambles in Cairo*.

² *Ibid.*

³ See report of *Comité* for 1890.



FIG. 108. CAIRO · MAUSOLEUM OF BĀRS-BĀY *extra muros*, and other tombs



FIGS. 109-10. CAIRO · DOMES OF TOMB-MOSQUES IN THE QARĀFAH 'EASTERN CEMETERY'



FIG. 111. JERUSALEM: PULPIT OF QĀḌĪ BURHĀN AD-DĪN, IN THE ḤARAM ASH-SHARĪF



FIG. 112. DETAILS OF THE PULPIT

madrasah (1423-4) in the Bazaar quarter of Cairo, at the corner of the Sharia al-Ghūrī, is a very plain cruciform building, with a square open *ṣaḥn* and wooden ceilings to the *liwānāt*. There is a mediocre minaret, and the best features of the building are the pulpit and reading-desk.

His convent and mausoleum (1432) in the Eastern Cemetery form a larger and more imposing group (Fig. 108), but here again the interest is limited. A double flight of steps leads up to a fine portal, above which rises a very ugly minaret, presumably a Turkish addition. The remainder of the façade is treated with piers and recesses, the latter having a stalactite cornice over. The parapet above has now disappeared. The dome over the mausoleum is the chief feature of the building. It is carried on a square substructure, the transition from this to the circular drum being arranged much as in the domes of Barqūq's mausoleum adjoining, but with bolder mouldings. But the exterior of the dome itself is covered with a wonderful lace-like pattern of geometrical figures, a distinct advance, as regards ingenuity, on the earlier flutings and chevrons that we have seen hitherto.¹

Close to this mausoleum is a smaller one, built by the Amīr Jānībak (1426-7), with a very similar dome covered with an interlacing geometrical pattern. These intricate forms appeared to have had a great attraction for the mind of the Saracenic craftsman in the fifteenth century. Gayet sees in them various 'sermons in stone', and a less fanciful writer, Bourgoin, has devoted a whole volume to their elucidation. Chapter X of this book is largely concerned with the same subject.

Bārs-Bāy built another mosque (1437) at al-Khānqāh. In 1430 the mosque of Jawhar al-Lālā² was erected near the Citadel at Cairo. It was extensively restored by the *Comité* in 1895-8, when the *ṣaḥn* was covered. The dome and the minaret are also later than the main fabric of the building. The interior contains fine carved ceilings and marble work, but the most important feature of the mosque is the ornamental metal-work of the entrance-doors (Fig. 232).

The mosque of al-Mu'inī at Damietta is of this period. It is a large *madrasah* of the usual cruciform type, with slender minarets (Fig. 113). The arches of the *liwānāt*, as in the mosque of Barqūq *intra muros*, are of horseshoe form, springing from a point very low down. The *ṣaḥn* is square, and is partly covered by a flat wooden ceiling with an octagonal central opening surrounded by a wooden balustrade. There is some fine marble paving, but the accessories and craftsmanship of the building appear shabby compared with contemporary masterpieces in Cairo. Another provincial example of nearly the same date is the mosque of as-Saffāhiyyah at Aleppo (1424-5), to which might

¹ See Bibliography at end of Chapter X.

² See report of *Comité* for 1902.

be added the Qaṣṭal Bāb al-Maqām (1427-8) in the same city. The walls and Citadel of Aleppo suffered severely at the end of the fourteenth century from earthquake and from the sack of the city by Tamerlane in 1400. Although they had been strengthened by Barqūq in 1384-5, they were extensively restored by his successors between

1404 and 1439. To this period belong several towers, parts of the Anṭākiya and Ḥadīd gates, and the Maqām and Nērab gates, and the great hall in the Citadel.

The fifteen years of Jaqmaq's reign (1438-53) saw the building of a small but very interesting mosque in Cairo, that of the Qādī Yaḥyā Zayn ad-Dīn, in the Muski quarter, close to the old canal (now filled in), that ran right through Cairo. It was restored by the *Comité* in 1884-97. It has a cruciform interior, and the *ṣaḥn* is covered with an octagonal lantern. The exterior generally, and the minaret in particular, are in the best style of the period. The interior is lavishly decorated and sumptuously furnished.

Īnāl, who followed Bārs-Bāy, left one magnificent memorial of his reign

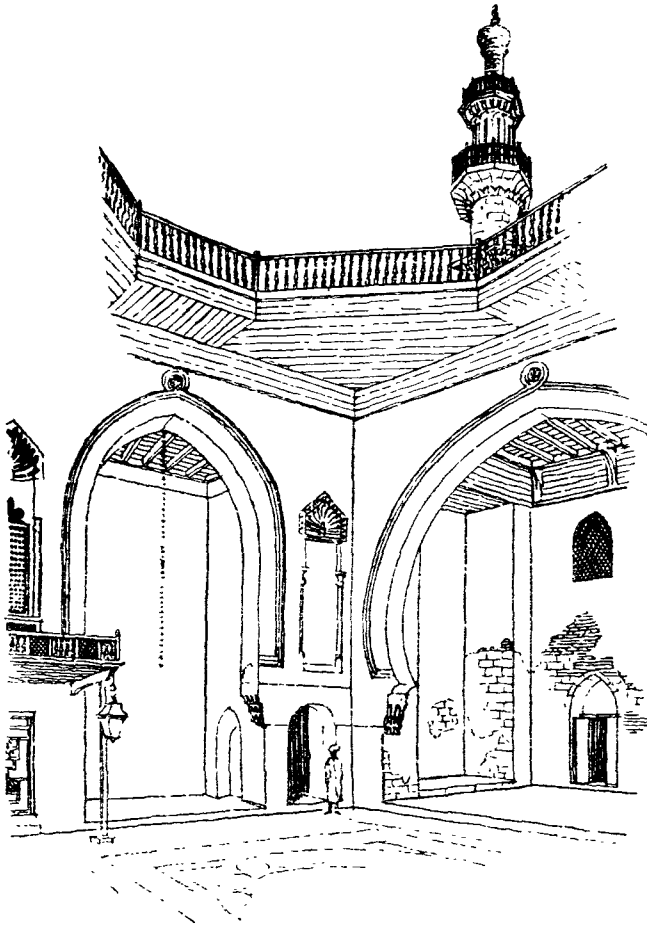


FIG. 113. DAMIETTA. MOSQUE OF AL-MU'INĪ.
INTERIOR. M.S.B. del.

(1453-61) in his great mausoleum, convent, and *madrasah* in the Eastern Cemetery (1450-6). Unfortunately it is in a very ruinous condition. Its subsidiary buildings join those of the neighbouring mosque of the 'Amīr Kabīr',¹ but the two structures are quite distinct. The minaret is somewhat bizarre in character, and altogether less graceful than most of those created at the time. The dome externally resembles those of the Khānqāh Barqūq across the road, already described. The interior is in a lamentable state.²

¹ See p. 129.

² Or was when I last saw it in 1919.

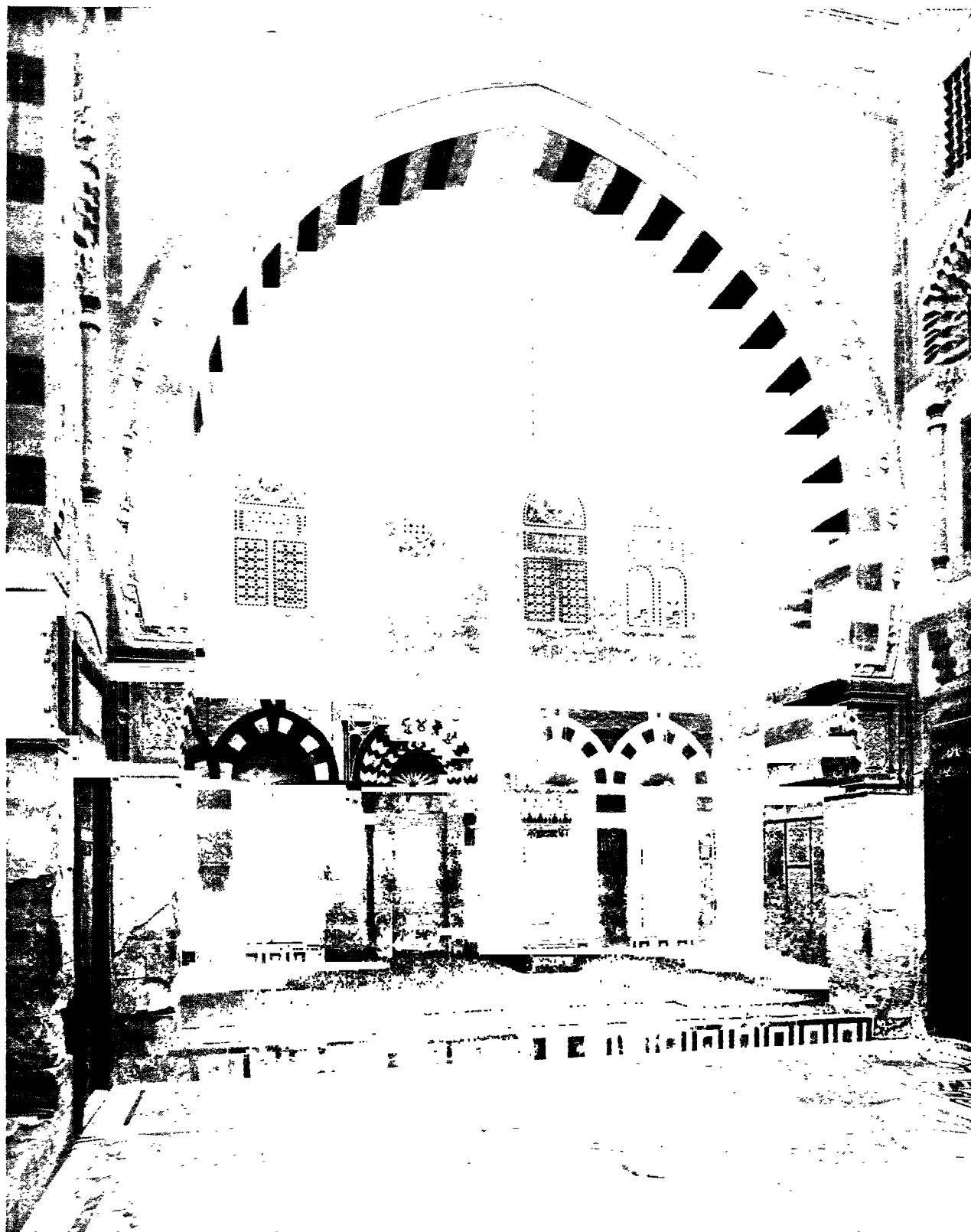


FIG. 114. CAIRO : MADRASAH OF QĀYT-BĀY *extra muros*. Interior

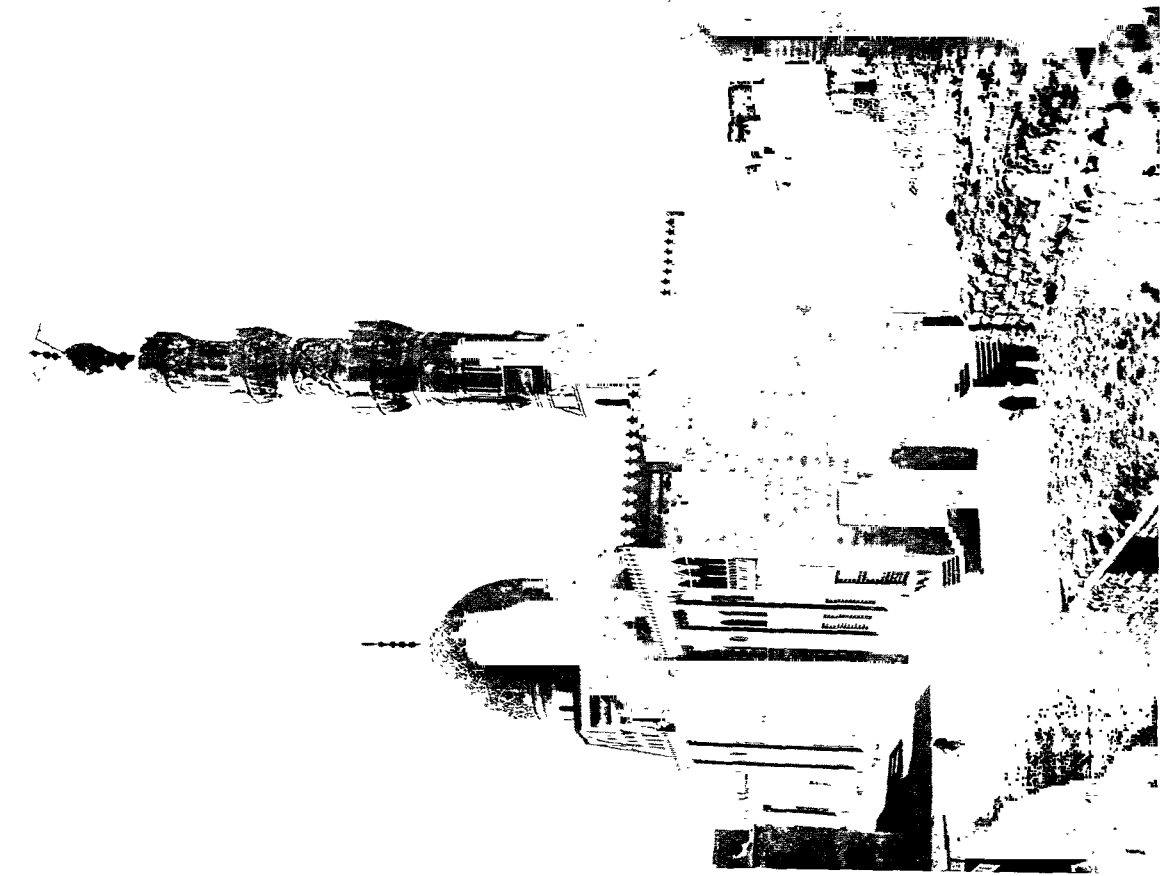


FIG. 115. CAIRO: MADRASAH OF QĀYT-BĀY
extra muros. Exterior

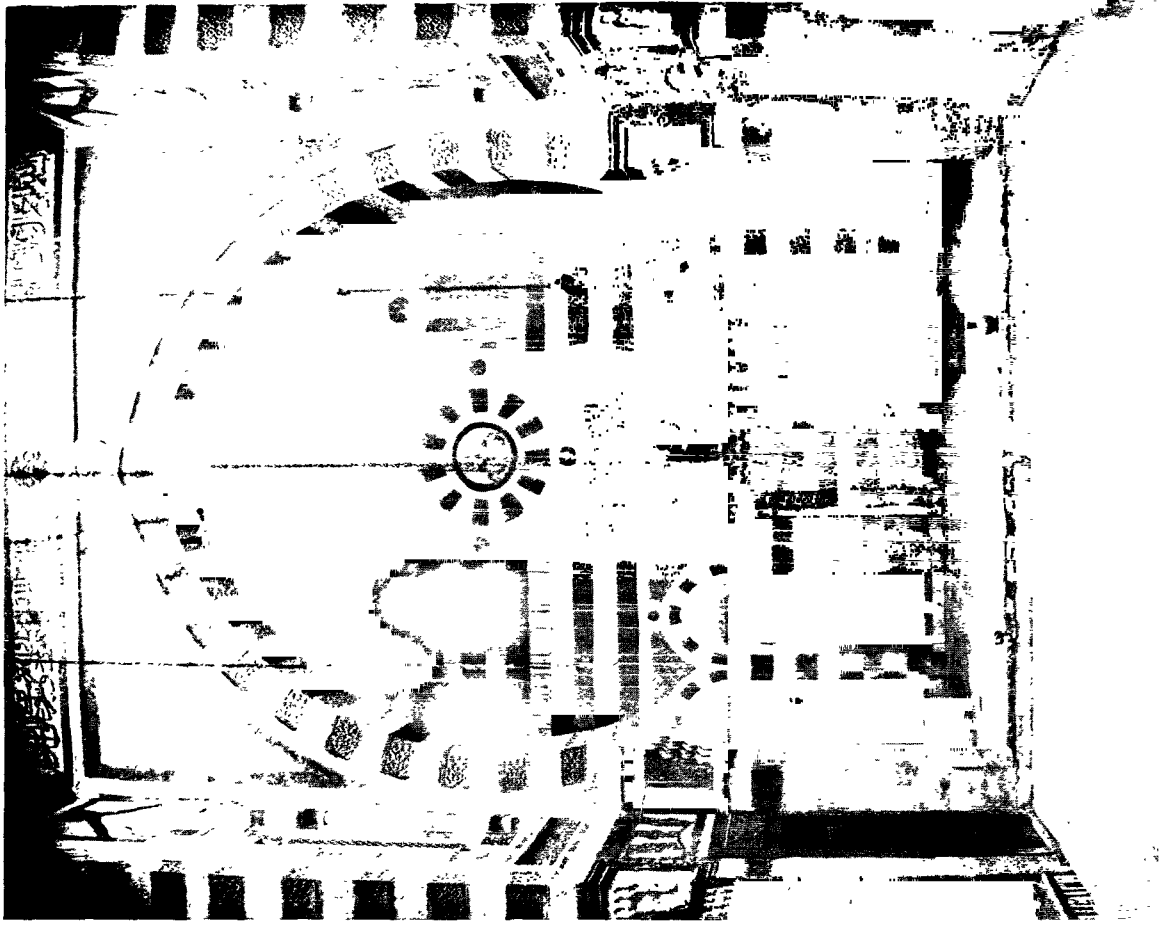


FIG. 116. MADRASAH OF QĀYT-BĀY
intra muros. Interior

A very small but very remarkable relic of this reign is the pulpit of the Qāḍī Burhān ad-Dīn, erected in 1456 in the Ḥaram ash-Sharīf at Jerusalem (Figs. 111, 112). It is commonly called the 'summer pulpit', from its purpose for open-air sermons: It is constructed of variegated marbles, with slender shafts of a Gothic character, pronounced horseshoe arches, and pierced balustrade. It displays in an entirely new form the skill of craftsmen of the period. Another monument of the same period is the mosque of al-Mu'allaq at Tripoli in Syria, built in the following year.

We now arrive at the reign of Qāyt-Bāy (1468-96), the most splendid epoch in all the history of Saracenic architecture. One at least of his buildings is familiar to every visitor to Cairo, but it is only one of a long list of masterpieces still surviving from that sumptuous age.

His *madrasah* and mausoleum (1472-4) in the Eastern Cemetery is the familiar building just mentioned (Figs. 114, 115, 117, and 179). It is described in detail by every writer on Saracenic art, in fact, it is the only mosque of the mameluke period described in some books, for it seems to typify the whole architecture of this period, though in reality it only marks its culminating point. It seems to have been customary for a sultan to commence the building of a mausoleum for himself immediately he ascended the throne, as though at least to assure himself of a fitting place of burial before he succumbed to the assassin's dagger or the poisoner's cup. The reputation that this mosque has acquired must be due to two characteristics of its design: the harmonious grouping of its parts—especially of the dome, the minaret, and the *sabīl-kuttāb*—and the fine craftsmanship displayed both in the exterior and the interior. The plan, though skilful, is not remarkable. A bold flight of steps leads up from the little *piazza* outside the mosque to the porch within which is a vestibule. From this one turns at right angles through a short passage to the *ṣaḥn*. This was originally covered but is now open to the sky. The plan is cruciform, the north and south *liwānāt* being very small, the west is the same width as the *ṣaḥn*, but extended by means of alcoves. The east *liwān* or sanctuary is comparatively large, and is entered under a bold horseshoe arch like that of Barqūq's mosque *intra muros*. On either side of the *miḥrāb* are two rectangular windows, and above these are large windows with pointed heads, filled with coloured glass. All four *liwānāt* have decorated wooden ceilings, but that above the sanctuary is modern. West of the sanctuary, and projecting farther south externally, is the square mausoleum, with a dome above, approached by a corridor. The whole of the interior is finished with exquisite taste. Yet it is in the external grouping that the architect has achieved his greatest success. The dome is covered with a geometrical pattern elaborated with floral

forms (Fig. 179). It is thus an advance on the others previously mentioned, but has not attained the flamboyant grace of the latest domes in the Eastern Cemetery. The minaret is undoubtedly one of the best in Cairo, and therefore much better than in any other city. The porch, with a three-lobed or cusped head filled with stalactites, is characteristic of the period, as is the general division of the façade into piers and recesses, the foliated parapet, the stalactites over the recesses, the arrangement and shape of the windows, the intricate joggle-jointing of the voussoirs above them, the red and white stripes of the façade, and the engaged column at the quoin. But the beautiful little *sabil* at the angle is the triumph of the whole design, and recalls

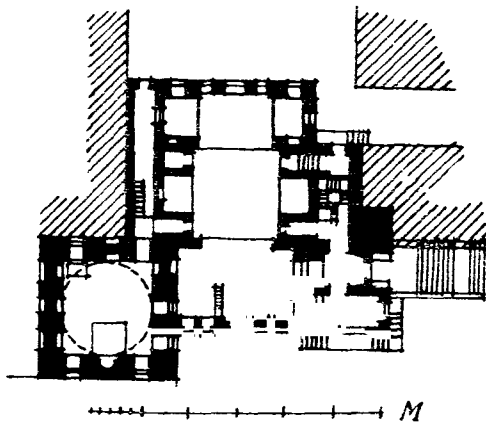


FIG. 117. CAIRO: MADRASAH OF QĀYT-BĀY (*extra muros*). PLAN

very vividly the arched loggias of palaces in Venice and Verona. At this point Saracenic architecture touches the Gothic of Italy very closely.¹

Qāyt-Bāy's *madrasah* (1475) in Cairo lies in the poor district near Ibn Tūlūn's mosque (Fig. 116). It has the usual *madrasah* plan, cruciform within a square, and was formerly surrounded almost entirely by buildings which have been cleared away during a recent restoration. There is a beautiful porch (in its proportions very similar to the last example) on the west side, but the principal entrance is at the south-

east corner, under the graceful minaret. The *ṣahn* is covered with an octagonal wooden lantern. The interior is richly carved, and carved stones are used alternately with plain masonry blocks much in the same way as 'rustication' was employed by Renaissance architects in Europe.

Qāyt-Bāy carried out extensive alterations at the Fāṭimid mosque of al-Azhar, including the Bāb al-Muzayyinīn ('Barbers' Gate') through which one generally enters the building. This is dated 1469, and is a lofty porch with a three-lobed head filled with stalactites (Fig. 105), in the same style as the portals of Qāyt-Bāy's two mosques. The west minaret probably dates from 1494,² and such of the wooden grilles or screens round the *ṣahn* as are not modern probably belong to the same period.

He also erected a *madrasah* (1481-91) at Rawḍah Island in Cairo,

¹ One of the smaller *liwānāt* of this mosque, as well as the *sabil-kuttāb*, is admirably illustrated by a line-block in Gayet's *Art*

arabe, Figs. 95 and 98. See also illustrations in report of *Comité* for 1897.

² Creswell, *op. cit.*, p. 50.

now largely rebuilt. In various parts of the city he constructed drinking-fountains and okels or khāns, as described in Chapter IX, also the Bāb al-Qarāfah (1475-84), a small pointed gateway on the south of the city.

At Jerusalem there is a *sabīl* in the Ḥaram ash-Sharīf (*Frontispiece*) usually associated with his name, but the date is not known. M. Saladin states that it was built in 1445. The dome is covered with a flowing arabesque pattern suggesting a later date. At Aleppo he built the Bāb al-Faraj (*c.* 1487).

In the harbour of Alexandria, Fort Qāyt-Bāy (1477-9) is, of course, of this period. It is a massive stone structure on the site of the ancient *Pharos*, formerly one of the 'seven wonders of the world'. It contains a *madrasah* of the ordinary Cairene type. But the chief feature is the entrance (Fig. 123) between two frowning towers strangely unlike anything else Egyptian.¹ Qāyt-Bāy also carried out important works of restoration and rebuilding in the ancient mosque at Medina, and added a minaret to the Great Mosque at Damascus.

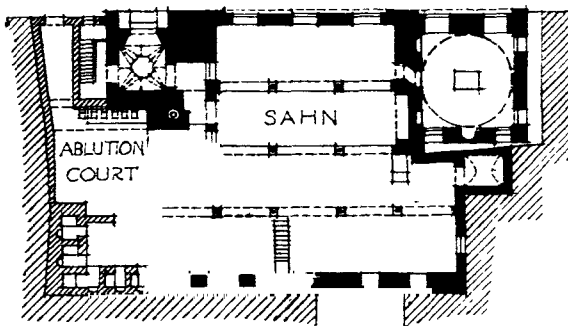


FIG. 118. CAIRO: MADRASAH OF JĀNIM AL-BAHLAWĀN. PLAN

The mosque of the princess Aṣal-Bāy (1498-9) in Madīnat al-Fayyūm, the chief town of the oasis and province of Fayyūm, is commonly but erroneously styled the 'mosque of Qāyt-Bāy'. It was largely rebuilt in 1892, but the fine portal² and the *miḥrāb* were incorporated in the new building (Fig. 235). Several other important mosques, besides those associated with Qāyt-Bāy himself, were built in Cairo during his reign. The mausoleum of the Amīr Jānim al-Bahlawān (1478) has been well described by Herz Bey, who restored it, in a special monograph.³ The mosque itself presents a most unusual plan (Fig. 118) with a small oblong *ṣaḥn* only the same depth as the west *liwān*, and half the depth of the east *liwān*, which is also much wider than the *ṣaḥn*. There are no *liwānāt* on north or south. The east *liwān* or sanctuary is divided into two aisles. The arcades are carried on antique columns, clumsily inserted, and are strengthened with the horizontal wooden tie-beams so largely used in early buildings.

¹ See report of *Comité* for 1908, giving full plans and details of the whole fort.

² See bibliography at end of this chapter.

³ See report of *Comité* for 1894, also my book, *Through Egypt in War-time*, pp. 59-60.

The interior is tastefully decorated, and contains fine examples of woodwork in the pulpit, reading-desk, and doors. Externally, the chief features are the minaret, the façade and porch, and the dome over the mausoleum. The minaret is modern as regards its topmost storey, but as restored is one of the most beautiful in Cairo. The porch, as usual in this period, is admirable. The façade conforms exactly with others described in this chapter, except that the stalactite cornice is of bolder projection than one usually finds. The dome over the mausoleum is covered all over with a rich floral pattern indicative of a late date, and this is confirmed by other external evidence, proving that the mausoleum was erected very early in the sixteenth century.

The *madrasah* of the judge Abū Bakr ibn Muzhir (1479–80) lies in a narrow lane rather difficult to find, but well repays a visit¹ (Fig. 119). It has the usual cruciform plan, cleverly adapted to an obtuse angle at the junction of two streets. One of the angles carries the substructure of a graceful minaret. There is nothing remarkable about the façade, except perhaps the metal-work of the entrance-doors. The *ṣaḥn* is covered with an octagonal wooden lantern. The interior masonry—richly carved—the marble wall-linings, the carved, coloured, and gilt ceilings over the *liwānāt*, all display the highest level of mamluke craftsmanship, restored sympathetically by the *Comité* in recent years.

The same description applies, almost without variation, to the mosque of the Amīr Qajmās al-Iṣḥāqī (1480–1),² near the Bāb Zuwaylah, on a confined site (Fig. 124). But one very important exception must be made. In this case the cruciform plan is not used. This mosque is not a *madrasah*, but is the first example, of those described in this book, of a mosque where the square *ṣaḥn* is completely covered by a flat octagonal lantern and is without north or south *liwānāt*. The sanctuary is wider and deeper than the west *liwān*. Adjoining it is the domed mausoleum. The minaret forms a graceful termination to the street-vista from the Bāb Zuwaylah. It may be noted that Qajmās al-Iṣḥāqī was Master of the Horse (*Amīr Akhūr*) to Qāyt-Bāy.

On the main road in the suburb of ‘Abbāsiyyah, close to the barracks, stands the mosque which is perhaps more familiar than any other to the British garrison in Cairo, the Fadawiyyah Mausoleum (Fig. 128), which Creswell, quoting Van Berchem, ascribes to the years 1479–81. It is a great cubical block surmounted by a plain dome without the usual external decoration. But the main portal, the windows flanking it, and the foliated parapet are all examples of good craftsmanship, and the interior of the mausoleum, which one reaches by mounting a staircase within the building, is of impressive simplicity, one’s interest

¹ See report of *Comité* for 1891 and 1897.

² See report of *Comité* for 1892

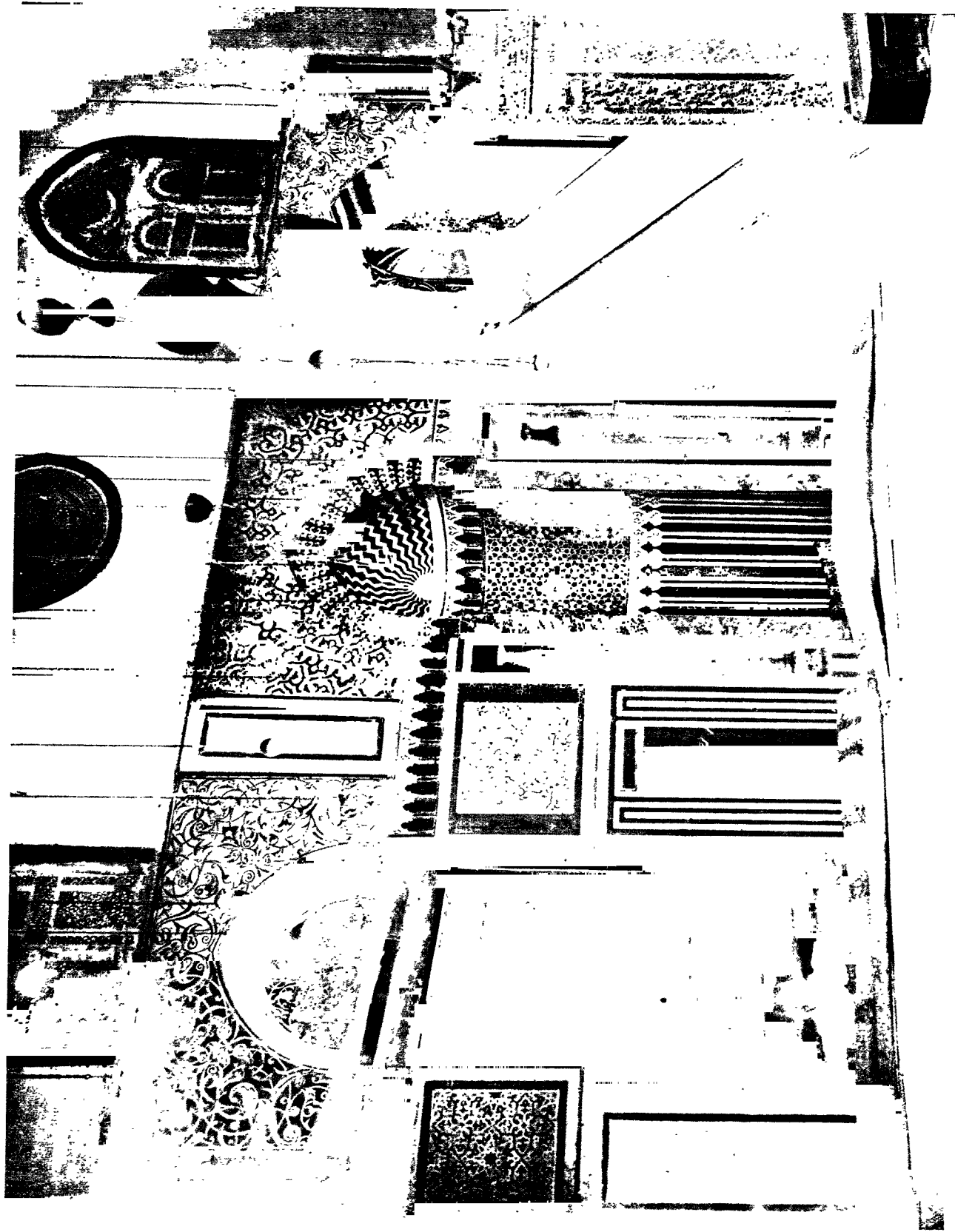


FIG. 119. CAIRO : MADRASAH OF ABŪ-BAKR IBN-NUZHİR. INTERIOR

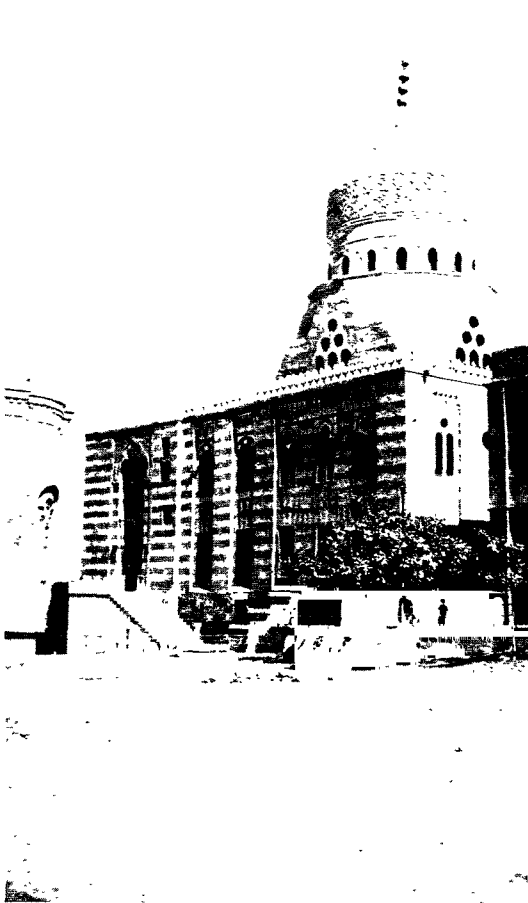


FIG. 120. CAIRO
Madrasah of Qānī-Bāy, Amīr Ākhūr Exterior

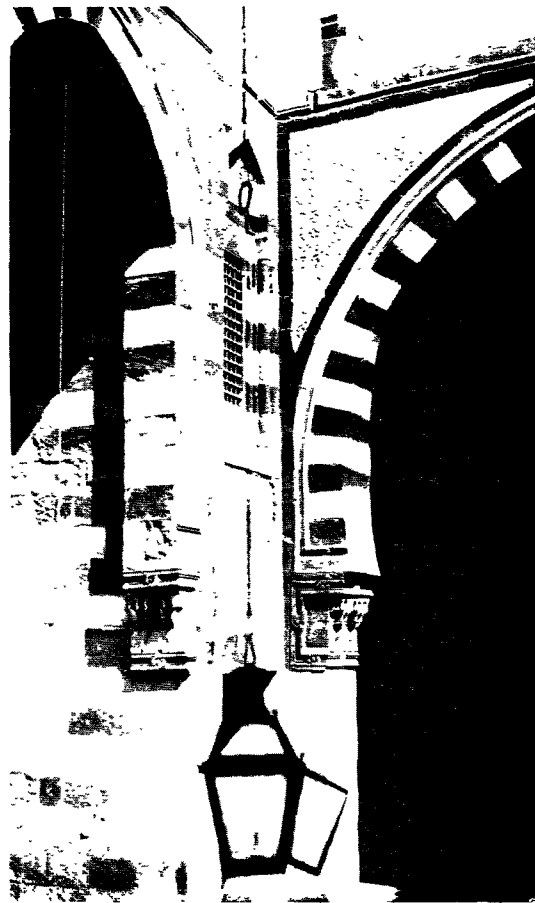


FIG. 121. CAIRO
Madrasah of Qānī-Bāy, Amīr Ākhūr Interior

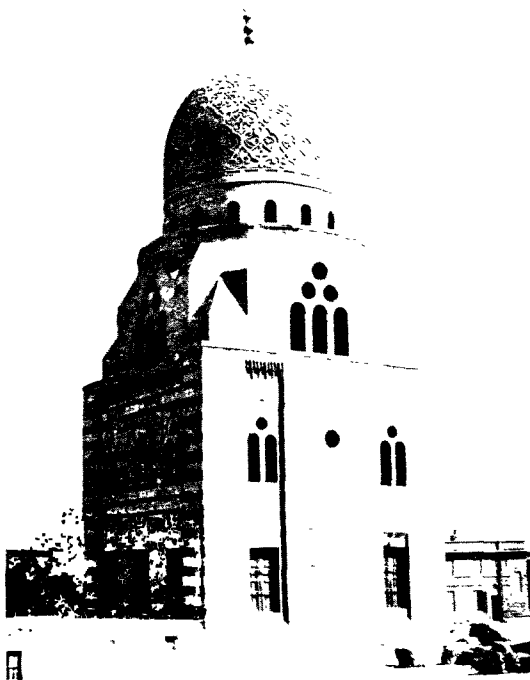


FIG. 122. ABBĀSIYYAH, NEAR CAIRO.
Mausoleum of Tūmān-Bāy



FIG. 123. ALEXANDRIA
Fort Qāyt-Bāy

being concentrated on the ingenious system of stalactites forming the pendentives of the great dome.¹

The mosque-mausoleum of Abu'l-'Alà (c. 1490), in the Sharia Būlāq, is another interesting example of the period, recently restored.

Actually in the military area at 'Abbāsiyyah, in an isolated spot on the desert near the old road to Suez, is the mausoleum of the Sultan al-Malik al-'Ādil Ṭūmān-Bāy, bearing the date 1501. In general appearance it closely resembles the later tombs in the Eastern Cemetery. The exterior of the dome is richly-decorated with a flowing pattern.

It may be compared with the very similar tomb-mosques of the Sultan al-Malik az-Zāhir Qān-sūh (1499) and the Amīr Sulaymān (1543) in the Eastern Cemetery, these representing the most ambitious efforts in the decoration of dome-surfaces in masonry.

Last of all may be cited a few monuments of this prolific period in Palestine and Syria, viz.: the Qas̄als of Akrād (1486-7) and Ramaliyyah (1491-2) at Aleppo; and the *madrasah* of Abū Bakr

ibn Muzhir al-Anṣārī (1487-8) and one of the *mawāzīn* (1471) on the west side of the Ḥaram ash-Sharīf at Jerusalem.

Of the reign of al-Ghūrī there remain several fine monuments, in Cairo especially. On either side of the Sharia al-Ghūrī in the Muski quarter, he built two great mosques facing one another, a *madrasah* (1503) on the west and a mausoleum and mosque, with a *sabīl-kuttāb* (1503-4) attached, on the east. The façades—(Fig. 126 shows the porch of the mausoleum)—are almost identical in height and detail. (A parallel case occurs in the mausoleum and mosque of the Amīr Shaykhū, also in Cairo, mentioned in Chapter VI.) These façades are lofty and the detail is attractive, but they only differ from the typical façade of the late fifteenth century in the increased elaboration of the foliated cresting of the parapet, of the upper tier of windows,

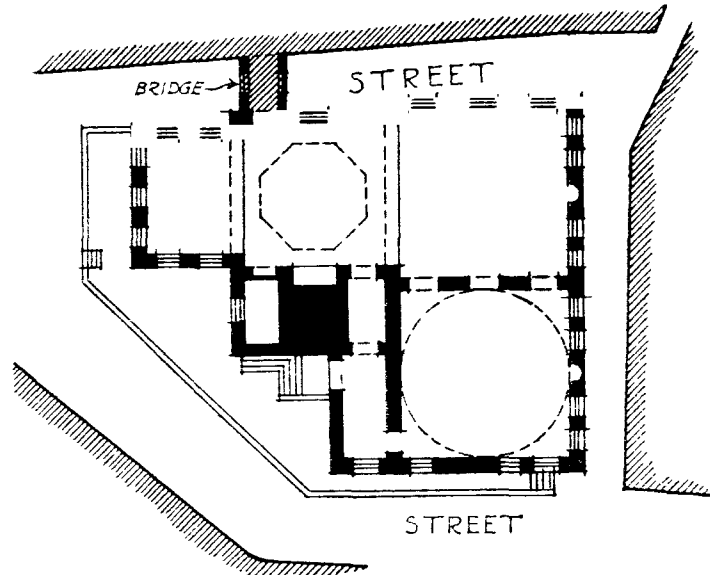


FIG. 124. CAIRO: MOSQUE OF THE AMĪR QAJMĀS AL-ISĤĀQĪ. SKETCH-PLAN

¹ See report of *Comité* for 1897; also illustration of pendentives in H. Saladin, *Manuel d'art musulman*, vol. i, fig. 111.

and of the mural carving. The *madrasah* has a cruciform plan, with four *liwānāt* round a square *ṣahn*, but the principal *liwān* or sanctuary is so much deeper and wider than the others that it becomes difficult to realize that it is so. Moreover, the width of the sanctuary is extended by two alcoves. The chief features of this beautiful interior (Fig. 127)

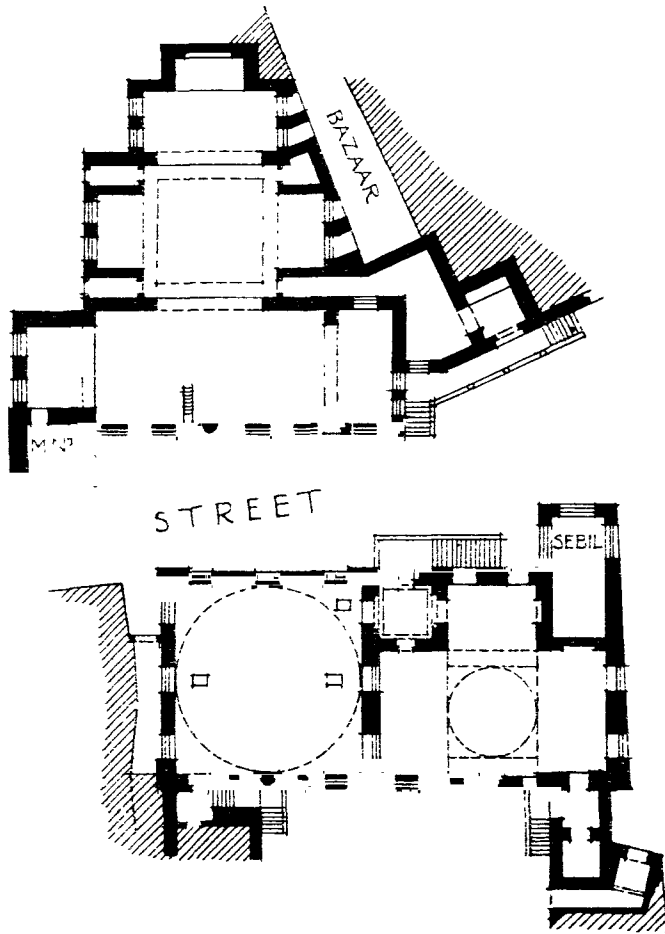


FIG. 125. CAIRO: MADRASAH AND MAUSOLEUM OF AL-GHŪRĪ. PLAN

are the elaborate carvings in low relief on the stone walls, the horseshoe arches of the two larger *liwānāt*, the great stalactite corbels beneath them, and the stalactite cornice forming a cove for the ceiling of the *ṣahn*. All the marblework and woodwork accessories are of a high order of craftsmanship. The mosque on the opposite side of the street consists of a covered *ṣahn* on north, east, and west, the *mihrāb* standing in the *ṣahn*, an unusual arrangement. The ceilings of all parts of the mosque are flat, and the decorative details of the interior are disappointing. The interior of the mausoleum is richly decorated, but the ceiling is merely plastered above the stalactite pendentives, which are as elaborate in design as any of their kind.

In addition to these two mosques, al-Ghūrī built another at al-Manshiyyah near Cairo, and also the hideous two-headed minaret in the mosque of al-Azhar.

Of other mosques erected in Cairo during al-Ghūrī's reign may be mentioned the mausoleum of the Amīr Ṭarā-bāy (1503-4) near the Bāb al-Wazīr, a simple *qubbah* with a dome enriched with flutings, as at the mosque of Barqūq *extra muros*; the *madrasah* and mausoleum of Qānī-bāy, Amīr Akhūr (1503),¹ near the Citadel, less refined in detail than the work of Qāyt-Bāy, but with a dome covered with flowing

¹ See report of Comité for 1901.

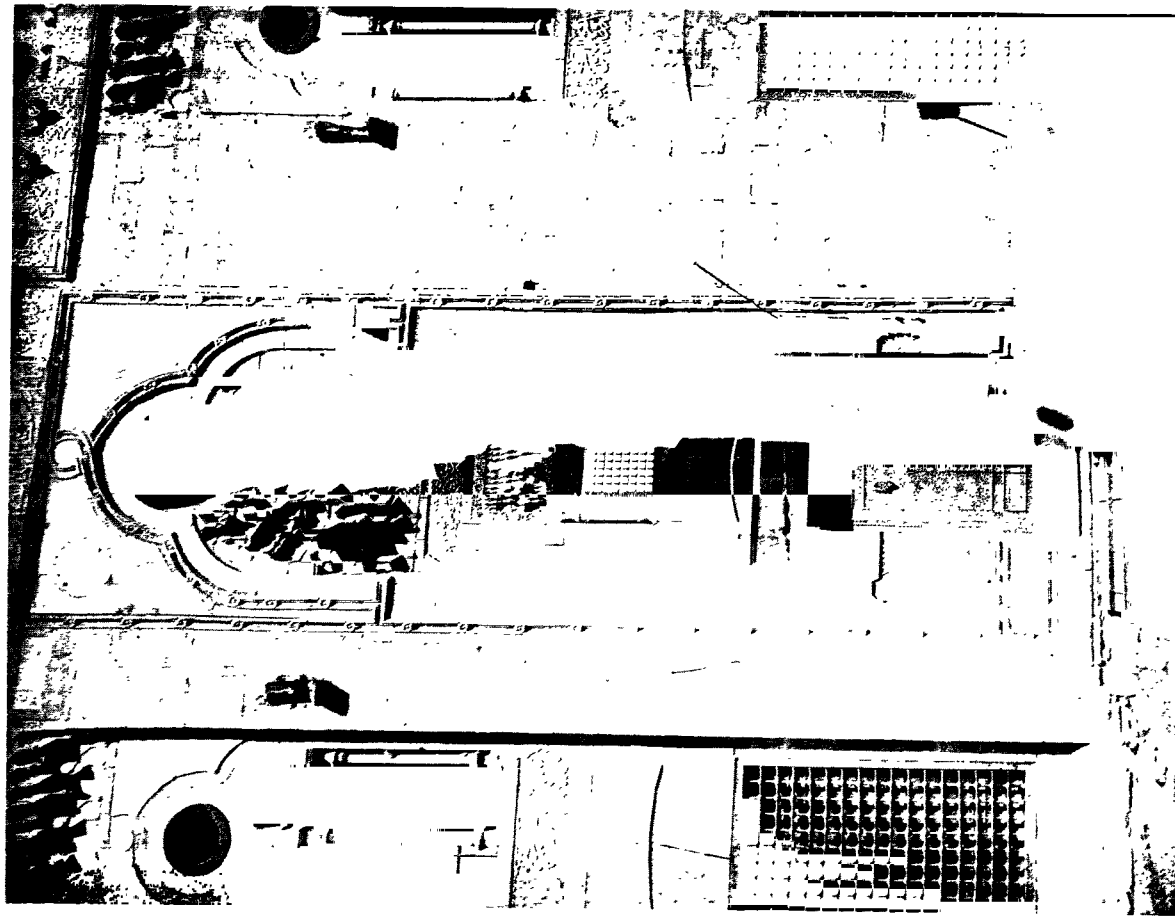


FIG. 126. CAIRO : MAUSOLEUM OF AL-GHURĪ. PORTAL

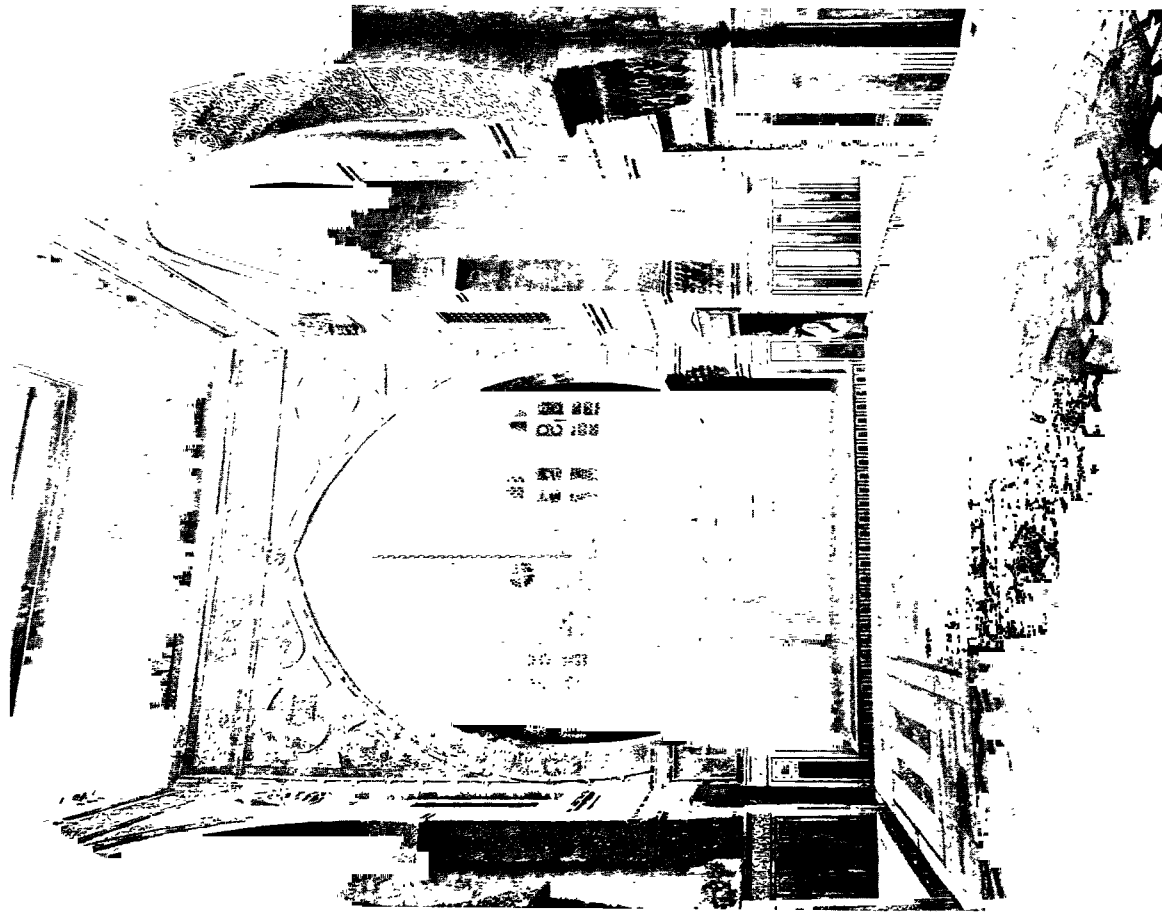


FIG. 127. CAIRO : MADRASAH OF AL-GHURĪ. INTERIOR

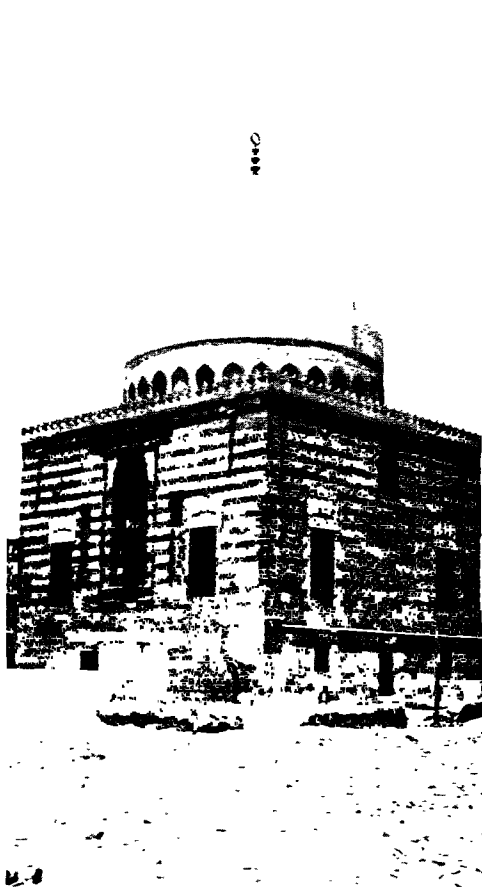
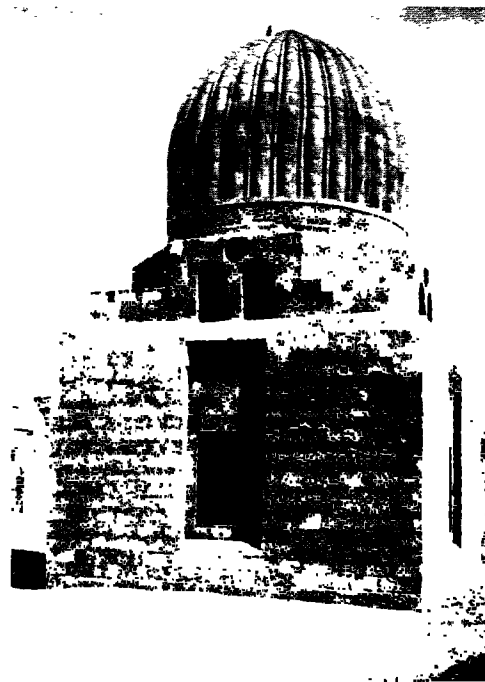
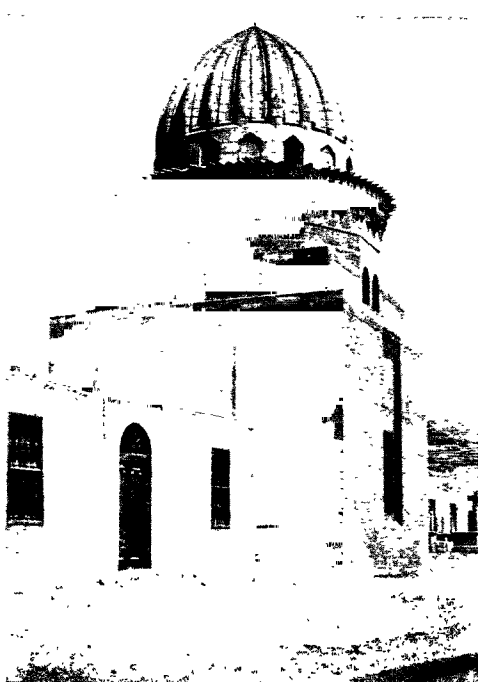


FIG. 128. 'ABBĀSIYYAH NEAR CAIRO
Fadawiyyah Mausoleum



FIG. 129 CAIRO
Mosque of the Amīr Aqsunqur ('The Blue Mosque')



FIGS. 130-31. CAIRO. TYPICAL DOMES IN THE 'TOMBS OF THE MAMELUKES'

arabesques (Fig. 120); the mausoleum of the Amīr Khāyir-bak (1502)—adjoining the more familiar 'Blue Mosque' (with which it is frequently confused)—a building with a remarkable plan, undergoing restoration by the *Comité* when I first saw it early in 1916; and lastly, the great *madrasah* and mausoleum of the Amīr Qurqumās (1506-7) in the Eastern Cemetery, more frequently known as the mosque of the Amīr Kabīr. This grand building calls for attention from the *Comité*, for it needs structural restoration, and if this were done, and some portions—such as the top of the minaret—completed where they have fallen away, it would be recognized as one of the finest mosques in Cairo. The dome is covered with chevrons. The *madrasah* has the usual cruciform plan. Speaking generally, there is a restraint in the design of this mosque that one seldom finds after the end of the fifteenth century.

Outside Cairo the principal buildings of which the dates are now known are at Aleppo, including the mosque of the Shaykh 'Alī Shatila (1514) and the Qaşṭals (drinking-fountains) of 'Alī Beg (1509-10) and Sāḥat Bizzā (1504-16). In Aleppo he also restored the city walls and erected the Bāb al-Jinān, the Bāb Qinnisrīn, the Bāb al-Aḥmar, part of the Bāb al-Ḥadīd, and the tower above the gateway at the Citadel.

Looking back over the long period of mameluke architecture in Cairo, nearly three centuries in all, we find that the development of the mosque had been continuous and gradual since the days of Saladin. Only one example of the great congregational mosque-plan exists, that of Sultan Baybars outside the city. The *jāmi'* or congregational mosque continued to be erected, but such buildings were not numerous, comparatively speaking. The reason was that Cairo, in spite of its large population, was now provided for in this respect. But two new types of mosque came to be erected in great numbers, especially in Cairo, which was during these centuries by far the most important city of the Muslim world. The cruciform *madrasah* or collegiate mosque, first initiated by Saladin in Egypt (though Nūr ad-Dīn had anticipated him in Syria), was adopted more and more as time went on, though the open square *ṣahn*, as well as the previously vaulted recesses, was usually covered with a flat roof by the end of the fifteenth century. Meanwhile the domed mausoleum or tomb-mosque, often combined with a *madrasah*, became increasingly popular with the sultans and their amīrs, who vied with one another in building domes and minarets. The name of the 'Dome-builders', as applied to the mameluke rulers by Lane-Poole, is thus amply justified. These wonderful mosques abound in the city itself, but are still more remarkable when seen in the splendid isolation of the desert-cemetery familiarly known as the 'Tombs of the Caliphs'.

The shape of the dome throughout the period hardly changed. Lane-Poole in his *Saracenic Art* has described its proportions and the method of setting them out geometrically. This method applies to most of the mosques in Cairo and in the Eastern Cemetery, but in the Southern Cemetery ('Tombs of the Mamelukes'), as well as in a few isolated examples (such as the 'Tomb of Monsi'), other forms are used, generally borrowed from Central Asia. The surface of the dome was first channelled into flutings, either concave or convex or both alternating, then into chevrons, then into intersecting geometrical forms of great intricacy, and finally covered with an elaborate flowing or floral pattern. Internally the dome was sometimes decorated. It rested on a square base. The transition from square to circle was contrived externally by a series of great rolls and ledges, or by a series of 'semi-pyramids', and internally by stalactite pendentives, at first large, coarse, and clumsy, but in later work becoming much smaller and more delicate. The whole question of dome-design is treated more fully in a later chapter, as is the development of stalactites.

The minaret, from its first function as a raised place for the use of the *mu'adhdhin*, became as much a feature of the building as the Gothic spire. At first a plain and stumpy turret, it became quite early in the fourteenth century a graceful tower in diminishing stages, the lowest one usually square, the others polygonal or circular, and in late examples had a very light terminal storey, consisting of a stone cupola, capped with the characteristic Saracenic finial, and supported on light stone columns. The minaret was freely decorated with carving, and was often placed with a view to effect in a street-view.

The façade, which had hitherto been almost neglected, was now carefully studied. It was divided by piers, between which were recesses containing the windows and crowned with horizontal courses of stalactites. Red and white stone were often used in alternating courses. The voussoirs of arches and the elaborately joggled lintels over doors and windows were similarly treated, either in marble or stone. The façade terminated in a crested parapet, consisting at first of tooth-like projections of Mesopotamian origin, and in later work of foliated cresting which became very elaborate in the time of al-Ghūrī. Windows were sometimes grouped in pairs, sometimes placed singly, but usually in two tiers. Those in the lower tier were invariably rectangular and filled with rectangular grilles of metal bars, with shutters behind. The upper tier generally had pointed heads, sometimes had a shaft separating them into two lights with a circular or cusped light above, and often contained coloured glass. Pierced traceries or grilles were often used in these openings and glazed with coloured glass, thus constituting one of the most unique and beautiful

features of the style. Bands of ornament in low relief, consisting of texts from the Qur'ān embellished with conventional floral patterns, were freely used as string-courses and panels both inside and outside the mosque.

The *liwānāt* were vaulted in stone in early mameluke mosques, ceiled with carved, coloured, and gilt beams of timber in the later ones. The walls of the interior were lined with a marble dado to a height of several feet, often to a height of 20 ft. in the sanctuary. The floors were paved with marble of various colours in geometrical patterns. The *mihrāb* always contained the most elaborate and costly marble-mosaic of all. The external doors were sometimes almost covered with metal ornaments, the internal doors were often inlaid with polygonal panels of ivory, mother-of-pearl, and various rare woods. The sides of the pulpit and of the reading-desk were similarly inlaid. The small dome or canopy over the pulpit was carved. Occasionally stone pulpits were used. Such, in brief, were the chief characteristics of mameluke architecture in Cairo, applying equally to provincial cities where the work was of a more rustic and less highly-finished character. The development of the various crafts—masonry, stucco, and mosaic work, woodwork, metalwork, glass and ceramics—will be discussed in subsequent chapters.

BIBLIOGRAPHY FOR CHAPTER VII

- Herz Bey, Max. *La mosquée de l'émir Ganem el-Bahlaouan au Caire*. Le Caire, 1908.
 Franz Pāshā. Die Grabmoschee des Sultans Kait Bai, in *Die Baukunst* (part iii).
 Guest and Richmond. Misr in the fifteenth century, in *Journal of Royal Asiatic Society*. London, 1903.
 Mehren, A. F. La coupole de Mélik el-Ashraf Abou-l-Nassr Barsbay, in *Mélanges asiatiques*, vol. vi. St. Petersburg.
 Also the works of Maqrīzī and Muir mentioned on p. 109, and references in general works cited on pp. 18, 19.

VIII

ARCHITECTURE AFTER THE TURKISH CONQUEST

IN A. D. 1517

WRITERS on the history of Saracenic architecture in Egypt and Syria usually close their story at the year 1517. In a sense they are right, for after that date there was an interruption in the free development of the native style. But it is inaccurate to say that the year 1517 marked the end of all things for Saracenic art in these countries. On the contrary, the picturesque streets of Cairo, the bazaars of Damascus, even the city of Jerusalem, owe much of their interest to buildings of this neglected period. Yet there was undoubtedly a decline from the glorious days of the mameluke sultans. Cairo especially suffered after the Turkish conquest, for then she sank from the position of a great and wealthy capital to that of a provincial city, still large and prosperous, but lacking all the prestige conferred by the presence of a despotic, highly-organized, and centralized government. Jerusalem, Damascus, and Aleppo were not so vitally affected, for they had been but provincial capitals before the Turks came.

The power of Turkish sultans, amīrs, and mamelukes, in the previous history of Egypt, has so often been pointed out in these pages that it may appear strange that the rule of an Ottoman sultan in Constantinople should differ from that of a mameluke Sultan (of Turkish ancestry) in Cairo, so far as its effect on architecture was concerned. Yet this change of masters did exercise a very vital and profound influence on architecture. To understand the reasons for this result, we must retrace our steps several centuries in order to ascertain the origin, as well as the characteristics, of Turkish architecture.

In the early Middle Ages, the Saljūq Turks were already established on the northern frontier of Syria. They played a prominent part in history during the Crusades, and have already been mentioned in this book. But the Ottoman, or, more correctly, *Osmanli* Turks—the branch of the great Turcoman stock that eventually penetrated into Europe and captured Constantinople—arrived in Western Asia much later, driven from their homes in Western Turkestan by Jenghiz Khān, the great Mongol Emperor of China who ruled over the greater part of Asia at his death in 1227. They were, says Sir Mark Sykes :¹

¹ Sir Mark Sykes, *The Caliphs' Last Heritage* (London, 1915).



FIG. 132. DAMASCUS: TAKIYYAH OF SULTAN SALĪM. VIEW FROM COURT



FIG. 133. DAMASCUS: TAKIYYAH OF SULTAN SALĪM. PORTICO OR NARTHEX

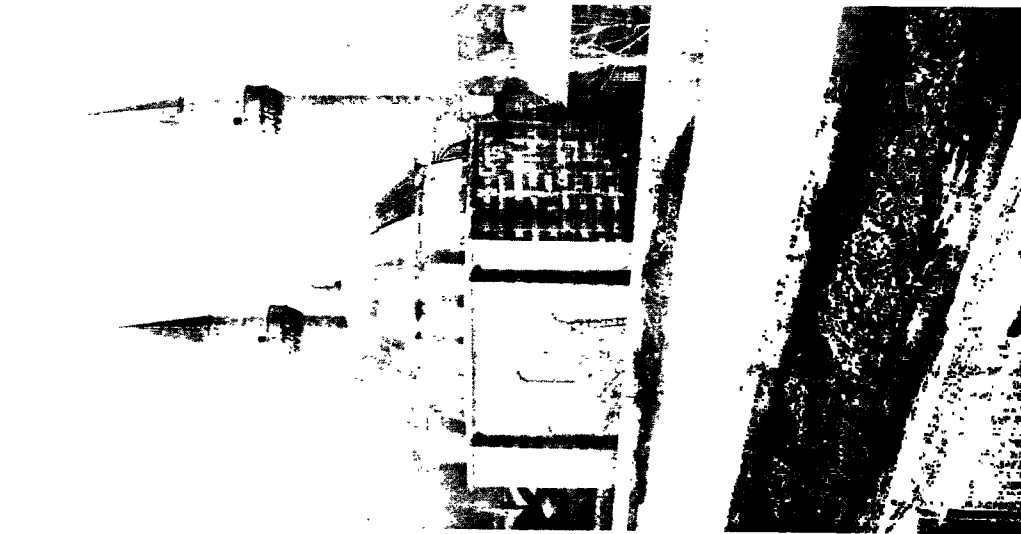


FIG. 134 Exterior

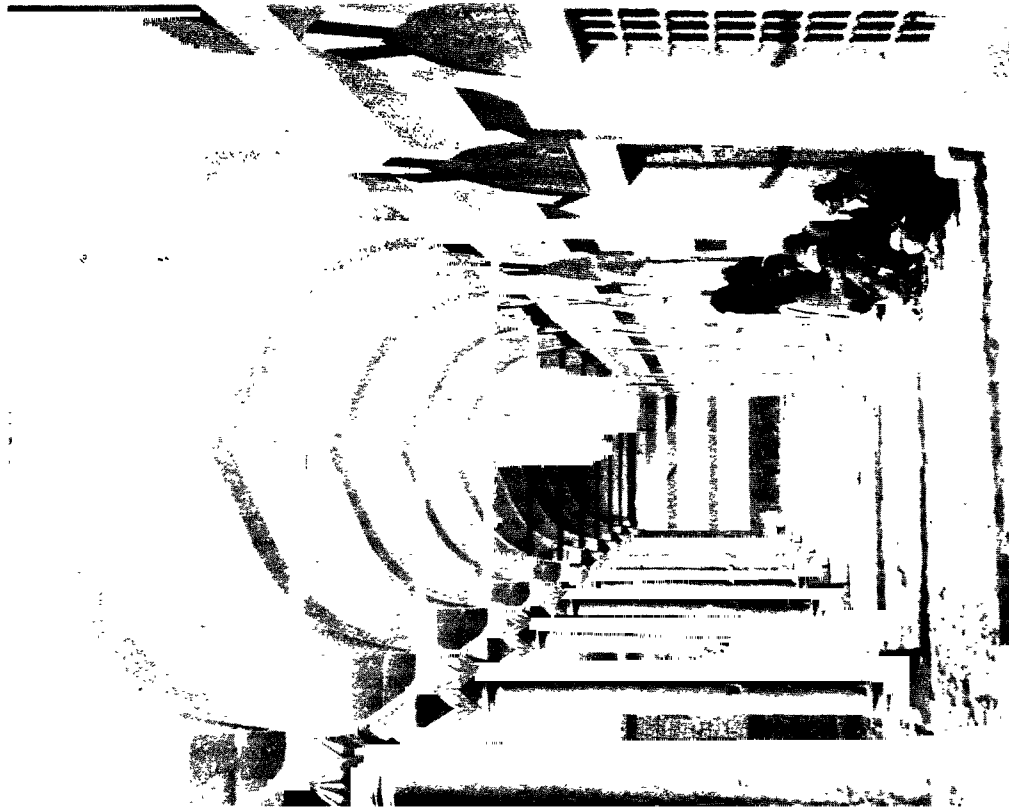


FIG. 135, Interior of Lāwān
DAMASCUS. TAKIYYAH OF SULTAN SALĪM



FIG. 136. Detail of Minaret

‘A small band of alien herdsmen, wandering unchecked through crusades and counter-crusades, principalities, empires, and states. Where they camped, how they moved and preserved their flocks and herds, where they found pasture, how they made their peace with the various chiefs through whose territories they passed, are questions which one may well ask in wonder.’

They finally settled among their kindred, the Saljūq Turks, in the mountainous district of Anatolia in Asia Minor. In the fourteenth century Konia, the ancient Iconium and the principal city of the province became their capital. It already contained a number of important buildings erected by the Saljūqs. Their architecture shows the influence of some of the Syrian art centres, such as Aleppo and Damascus, especially in regard to porches; of Persia in ornament and craftsmanship; and of Byzantium in planning, construction in general, and ornamental detail. Konia lay at a point where trade-routes from these three great centres of civilization converged. The Ottomans thus found there on their arrival many of the elements that in later times became most characteristic of their own architecture, the peculiar rectilinear type of stalactite—very different from the pointed form used in Egypt and Syria—the deeply recessed porch with a stalactite vault over, lateral niches on each side of the porch, a boldly-defined rectangular frame enclosing it, and *faience* decoration freely used in almost every part of a mosque. They also came into contact with Byzantine ornament in a variety of forms, but as this was essentially of a Christian nature, conflicting alike with the restrictions of the Qur’ān and with their own policy, they deliberately eschewed its use. They were, however, only too glad to avail themselves of the services of Christian architects, who designed many of their most important buildings in the fifteenth and sixteenth centuries, relying on imported craftsmen from Persia, Syria, and Egypt to provide decorative details in the Saracenic style. The buildings erected in Konia during the thirteenth century display an extraordinary variety of design. Some of them resemble in most respects contemporary work in Persia, Egypt, or Syria. They have stalactites, joggled lintols, *faience* decorations, bold rosettes applied to blank masonry walls, and great brackets or consoles supporting overhanging storeys. Others seem to resemble nothing on earth, unless it be the architecture of India. Even the neighbouring country of Armenia, with its vigorous school of native design, cannot be held responsible for these vagaries.

The Ottomans in 1338 moved their capital to Brusa, a city south of the Sea of Marmora and not very distant from Constantinople. Here, and in the neighbouring town of Nicaea, they built, in the late years of

the fourteenth and the early part of the following century, several mosques which were the immediate predecessors of the great series of Imperial mosques of Constantinople. Already in these may be seen the strength of Byzantine influence on the plan and grouping. The dome becomes the controlling element of the design. In front of it is usually a forecourt or atrium. In the 'Green Mosque' (1378) at Nicaea we find stalactites used in two new ways, as a capital for a large circular column, and to form a rectangular frame round a doorway. In neither case is the effect very pleasing. In the mosque of Sultan Murād (1421-51) at Brusa alternate courses of stone and brick are used, a typical Byzantine method of walling for external ornament. The two chief mosques of Brusa afford an interesting comparison between two types of plan that were struggling for ascendancy at this time. The 'Great Mosque' (1379-1414) has a series of aisles parallel with the *mīhrāb* wall. This M. Saladin calls the Moorish type. The 'Green Mosque' (1424) has the Egyptian *madrasah*-plan, with the chief *līwān* as large as the covered *ṣahn*, and without a north *līwān*. Over the chief *līwān* and the *ṣahn* are domes of equal diameter. The four angles of the cross are filled with square rooms, and the place of the north *līwān* is filled by a porch with vestibules on either hand. There is a porch with rectangular stalactites, a tiled *mīhrāb*, coloured glass in the windows, and *faïence* in most parts of the building. M. Saladin considers that an *atelier* of Persian tile-workers must by this time have been established in Brusa and Nicaea. The Ottoman architecture of Brusa and Nicaea differed little from that of the Saljūqs, though an advance towards simplicity is apparent, and an evident borrowing from Byzantine models both in planning and construction. There is, however, a great difference between these buildings and the mameluke mosques of Cairo in regard to domes and minarets. The Ottomans were now using a low type of dome borrowed from Constantinople and Salonica, very different from the lofty stilted Saracenic dome of Egypt, and in place of the minaret in diminishing stages, with a light open storey—usually circular on plan—crowned with a small cupola, they adopted what is commonly called the 'pencil' type, a very lofty and slender cylinder of stone diminishing very slightly and terminating in an elongated cone-shape very like a pencil-point. The gallery for the *mu'adhdhin* is of slight projection, and rests on corbel-courses of stalactites.¹

On the capture of Constantinople in 1453 the seat of government was transferred there, and the great Christian church of Santa Sophia was converted into a mosque. It also served as a model for the numerous

¹ For illustrations of these mosques at Brusa and Constantinople, see the works of Reynolds and Saladin cited in Bibliography at end of chapter.

great mosques that were built round it in the following centuries by the Ottoman Turks. Already at Konia, far more at Nicaea and Brusa, Byzantine influence has been noted, but in Constantinople its power was doubled. The first new mosque in the city was built in 1463-9 for Muḥammad II ('the Conqueror') by a Greek named Christodoulos, but was destroyed by earthquake, and so does not now exist. The so-called 'Chinli-Kiosk' (1466-70, restored 1590) has a cruciform plan with a central dome on pendentives, and is freely decorated with *faience*. The mosque of Sultan Bāyazīd (1497-1515) is a much more ambitious building, consisting of two nearly equal squares on plan, each measuring about 135 ft. One of these is formed by the mosque itself, the other by an open cloister, forecourt, atrium or *haram*, surrounded by colonnades, and containing a central fountain. The building is laid out on axial lines, with an entrance porch on each axis of the forecourt. The architect's name was Khāyr ad-Dīn. The mosque had a large dome, buttressed by semi-domes as at Santa Sophia, but had none of the women's galleries found in the latter, these being useless for Muslim worship. There is a remarkable porch at the side of the mosque which is typical of Saljūq architecture, recessed, and covered with a vault formed of rectilinear stalactites, tapering upwards but not forming a point as in the Saracenic porches of Egypt. Round this porch is the usual rectangular frame used by the Saljūqs. Over each bay of the cloisters is a small dome.

Bāyazīd was succeeded by Salīm (1512-20), in whose memory was built a smaller mosque (the 'Salīmiyyah') with a large dome on a simple square substructure (like the Fadawiyyah Mausoleum at 'Abbāsiyyah near Cairo, but of Byzantine type), in 1520-4. This mosque is the simplest in general design of the larger examples in Constantinople, has only two minarets, and may have inspired the building next to be described.

Salīm was the sultan who conquered Syria and Egypt in 1516-17, so at this point we continue the thread of architectural development interrupted by this brief digression on the origin and nature of Turkish architecture. How necessary such a digression is appears at once on examining the first—(and in some ways the most important)—mosque erected during the centuries of Turkish occupation, the Takiyyah (1516) built by Sultan Salīm west of Damascus immediately after his conquest of that city (Figs. 132, 133, 134, 135, 136, and 137). A Takiyyah is a convent for dervishes, members of a religious order. Such orders were not foreseen in the early centuries of Islam, and their existence is in a sense foreign to the spirit of the Muslim faith. They appear to have been based on the ascetic principles of the early Christians, influenced later by ideas borrowed from Buddhism. Eventually they

were recognized as orthodox in most cases. They are chiefly interesting to modern tourists for their more extravagant practices, and a visit to watch the antics of the 'dancing' or 'whirling' dervishes is considered a necessary item of the round of Cairo's many attractions. But in the early days of the Ottoman empire, the dervish orders were chiefly useful in conjunction with military service. An annual levy was made

from the subject Christian races for recruits for the Turkish army, and these young 'janissaries', corresponding in every way to the earlier 'mamelukes', were nominally attached to an order of dervishes—'and though at first not obliged to embrace Islam, were one and all strongly imbued with the mystic and fraternal ideas of the confraternity to which they were attached'.¹

The result of the rise of these orders was to produce a new type of conventual or collegiate mosque, surrounded by cells for the dervishes. Thus in the Takiyyah at Damascus the forecourt is surrounded by rows of such cells grouped round a colonnade. The chief interest of this large building is its remarkable plan. The mosque itself consists of a dome of Byzantine type, supported on pendentives resting on a simple square substructure, as in Salim's mosque at Constantinople just described.

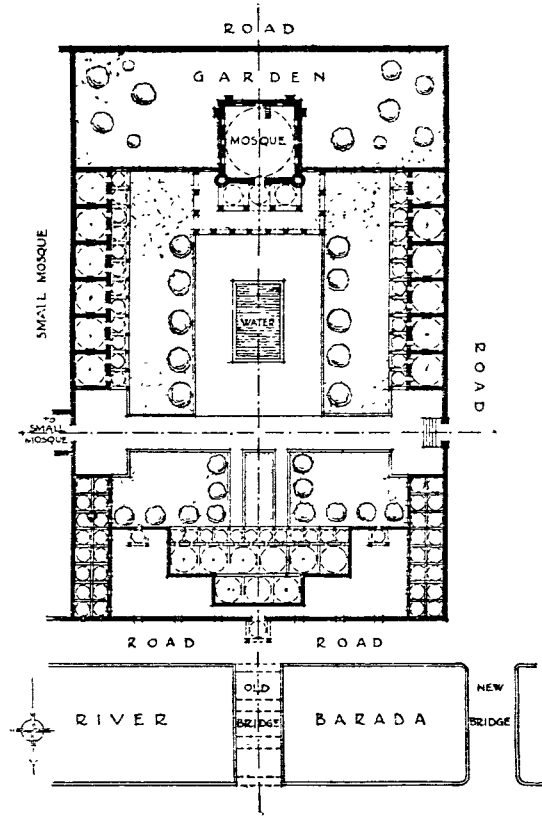


FIG. 137. DAMASCUS: TAKIYYAH OF SULTAN SALİM. SKETCH-PLAN OF LAY-OUT. *M.S.B. del.*

Immediately in front is a portico of three bays, each surmounted by a cupola. Round this portico runs a colonnade corresponding with the remaining colonnades round the forecourt, but covered with a hipped roof. The twin minarets are of the slender 'pencil' type, and rest on the north-east and north-west angles of the mosque proper. The mosque stands on the principal axis of a magnificent 'lay-out', on a scale quite unknown in Saracenic architecture, and recalling rather the plan of a Venetian or Genoese villa of the sixteenth century. This similarity may not be altogether a coincidence. The transverse (east and west) axis is terminated at either end by a porch, that on the east

¹ Sir Mark Sykes, *op. cit.*

giving access to another and smaller mosque forming part of the scheme. On the north and south axis is a tank or pool of water, flanked by an avenue of plane-trees (which were being cut down for fuel by the doughty soldiers of the King of the Hījāz, when I visited Damascus at Christmas, 1918. The colonnades were then piled with German and Turkish medical stores, and the place was apparently deserted). As indicated on the plan, each bay of the colonnade and of the range of cells behind is indicated by a small dome or cupola. The principal axis of the plan is continued through an open porch at the north end of the mosque across a small bridge over the River Barada, thus recalling more than ever the plan of the Genoese villa with its water-garden and sea-gate.¹ The arches of the colonnades are all of Persian type, with striped voussoirs, curious stalactite capitals of a type not found in mameluke Egypt, and iron bars to strengthen the imposts. These iron bars are frequently found in the great mosques of Constantinople. They take the place of the wooden ties used in Fāṭimid and subsequent mosques in Cairo, and are just as offensive aesthetically. The *tympana* of the arches over the windows of the cells, within the colonnades, are filled with beautiful *faience*. Otherwise there is little of interest in the craftsmanship of this building, though it contains a few stained-glass windows.

The reign of Sulaymān the Magnificent (1520–60) is marked by the erection of a large number of buildings in Egypt and Syria, as well as in Constantinople, where the huge mosque (1550–6) that bears his name dominates the city. He also built the great mosque of Shāh Zāda (1543–8). Both these maintain the tradition evolved from a combination of the plan and grouping of Santa Sophia with Saljūq, Persian, and Saracenic details of construction and decoration. They depend largely for their effect on the contrast obtained between the massed piles of the domes and the slender vertical lines of the numerous minarets. The architect of these two mosques was an Albanian, one Sinān, who held an important post among the Janissaries. According to Montani Effendi² he died at the age of 110 after having erected 73 mosques, 49 oratories, 52 madrasahs and schools, and a great number of other buildings which are cited. Some of these were actually constructed outside the limits of the Turkish Empire, and, at the invitation of the Mogul emperor Bābur, he built several fortresses, palaces, and tombs in India.

Among these may have been included some of the Egyptian and Syrian mosques built during Sulaymān's reign, including the mosque of Sulaymān Pasha (1528) in the Citadel at Cairo, the Takiyyah as-

¹ See my *Baroque Architecture*, chapter v, 'Genoa' (No. iv) in *The Builder*, 1914.
and my articles on 'The Architecture of' ² See Bibliography at end of this chapter.

Sulaymāniyyah (1543) and the mosque of Shāhīn al-Khalwatī (1538), both in Cairo; the mosques of Tāwāshī (1537-8), al-Khusrawiyyah (1545), al-Mu'allāq (1559), and the Takiyyah of Shaykh Abū Bakr, all at Aleppo.

In Jerusalem Sulaymān the Magnificent is responsible for most of the walls and gates of the city as we now see them. Of these the most important is the great Damascus Gate (c. 1550-60), built with a double right-angled turn within to prevent direct access to the city from outside. The curious machicolations are of Turkish character, but the character of the pointed arch suggests either an earlier period or the hand of a craftsman more familiar with the work of the Crusaders and of Sultan Baybars than with anything at Constantinople.

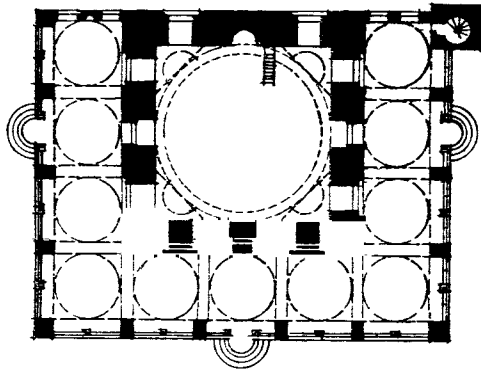


FIG. 138. CAIRO: MOSQUE OF SINĀN PĀSHĀ AT BŪLĀQ. PLAN

The same criticism applies no less pertinently to some of the smaller gates of the city (Fig. 43), but most of all to the little drinking-fountains in the old streets, of which two examples are illustrated (Figs. 44 and 51). If, as is generally held, all of these are to be attributed to the work of Sulaymān and his successors, they form an extraordinary problem, and suggest that Crusader influence had an Indian summer in the middle of the sixteenth century. The fountain in the 'Akabat at-Takiyyah, in spite of its Saljūq

stalactite-capitals in its lower part, has arch-mouldings containing running vine-leaves and ball-flowers (or their equivalent) as definitely Gothic as anything in Palestine, with a drip-mould above them; while that in the Bab al-Wād suggests English Gothic of the thirteenth century in everything except the stalactites of its vault.

Of a very different character is the beautiful mausoleum of the Amīr Sulaymān (1543) in the Qarāfah at Cairo, which, in spite of its late date maintains the tradition of its neighbours of Qāyt-Bāy's time, and even surpasses them all in the grace of its proportions, its dome-enrichment, and its foliated parapet.

The progress of definitely Turkish influence is maintained in the well-known mosque of Sinān Pāshā¹ (1571) at Būlāq, a suburb of Cairo now included in the city (Figs. 138, 142). It consists of a large square enclosure, covered with a low dome of Byzantine type resting on stalactite pendentives very like those of the Fadawiyyah Mausoleum at 'Abbāsiy-

¹ Illustrated in Franz Pāshā's *Die Baukunst des Islam*, and in Prisse d'Avennes' *Art arabe*. See Bibliography I b., after Chapter I.



FIG. 139 DAMIETTA
Mosque of Azza'farni. Minaret

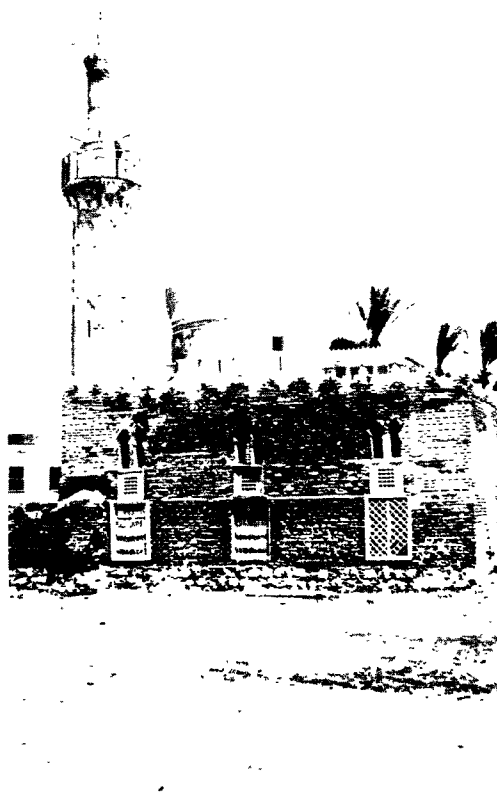


FIG. 140. ROSETTA
Mosque of Muhammad Al-Abbasi



FIG. 141 CAIRO
Sabil of Ibrahim Bey



FIG. 142 CAIRO
Mosque of Sinan Pasha at Bulaq. Exterior



FIG. 143. CAIRO
Mosque of Al-Malikah Satiyyah Court



FIG. 144. DAMIETTA
Mosque of Al-Bahr
Doorway



FIG. 145. ROSETTA
Mosque of Alt 'Al-Mahallh
Doorway



FIG. 146. CAIRO
Mosque of Al-Malikah Satiyyah. Sanctuary

yah, already described. The drum of the dome is pierced with curious cusped and pointed windows, between each of which is a buttress. In Constantinople these buttresses assumed various forms, here they are treated as coarse finials. The façade of the building closely follows the tradition of Qāyt-Bāy and Ghūrī, but has only one tier of windows. There is a minaret of a rather stumpy Turkish type, which was widely used in Cairo after this date. Round three sides of the building runs an arcaded loggia or portico, with a small dome over each bay. This loggia is not continued round the south-east (Mecca) wall. The woodwork of the interior is panelled in geometrical patterns, and there is stained glass in the windows, but the level of craftsmanship is far below that of the mameluke period, and there is a coarseness of detail and a want of scale in all these Turkish buildings in Cairo.

Another type of building that continued to develop during the Turkish period, when the religious needs of Cairo were so well satisfied that new mosques were less frequent, was the *sabīl-kuttāb*. A charming example is the little *sabīl* of Khusrau Pāshā (1545) nearly opposite the mausoleum of Qalāwūn. The word *sabīl* signifies 'the good path', and is applied generally to a public fountain, which was usually annexed to a mosque. The little loggia or *kuttāb* above it was used as a school for the children of poor parents.

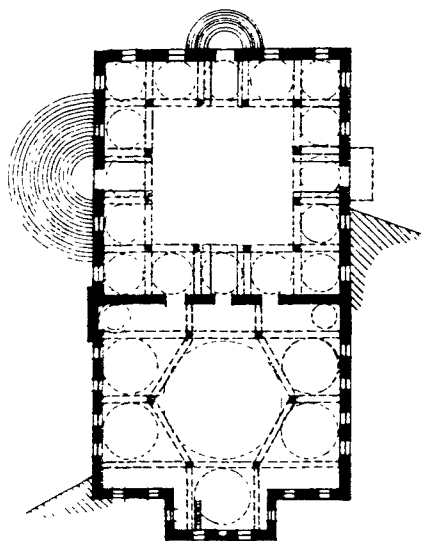


FIG. 147. CAIRO: MOSQUE OF AL-MALIKAH ŠAFIYYAH. PLAN

The only other really important Turkish mosque in Cairo is that of al-Malikah Šafiyyah (1610) near the Sharia Muḥammad ‘Alī (Figs. 143, 146, 147). It consists of a very large square building, the mosque proper, with a forecourt, of approximately similar dimensions surrounded by an arcade with domes over each bay. This forecourt has three porches, each approached by a flight of semicircular steps, those on the south-west being very numerous. This forecourt is absolutely Turkish in its arrangement, proportions, and clumsy scale. But the chief feature of the mosque itself is the method by which the great central dome is carried. It rests on a hexagon formed by six slightly pointed arches, strengthened with heavy iron bars carried across the springing and let into the adjoining walls. The arches are supported on a motley collection of antique columns with Corinthian capitals. (Antique columns also support the arcade round the forecourt.) The *mīhrāb* is very wide, and stands in a large recess. From the south-west angle of the façade

risers an ugly minaret, on the north-west angle is a small dome. The whole of the workmanship of the building is crude in the extreme, and the materials are of the coarsest. The only point of interest is the dome, and the origin of that feature appears to be found in the plan of the mosque of Salīm II (1570-4) at Adrianople.¹ In that case, however, the dome is carried on eight ten-sided piers instead of on six antique columns. It was designed by that prolific architect Sinān, who is related to have remarked, on its completion, that when he built the Shāh Zāda mosque he was only an apprentice, when he finished Sulaymān's he was a workman, but that now he was a master! Among his many works was the rebuilding of portions of the Great Mosque at Mecca.

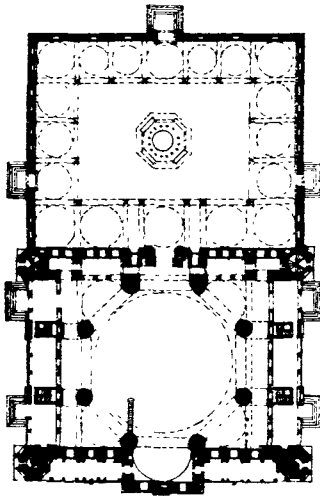


FIG. 148. ADRIANOPLE:
MOSQUE OF SALĪM II

The seventeenth century saw the reconstruction of the large mosque of Aqsunqur (the 'Blue Mosque', see p. 107) by Ibrāhīm Aghā in 1639. His work here was so considerable that the mosque is often called by his name, but it is Saracenic rather than Turkish in character. It is chiefly noteworthy for the fine Persian tiles that it contains. The *mihrāb* wall of the old mosque is lined with this *faience*, probably brought here from Syria or Anatolia. Tiles of the same period may also be seen in the small *sabil-kuttāb* of Yūsuf Aghā al-Ḥabashī (1677-8), between the 'Blue Mosque' and the Bāb Zuwaylah. (The fine tiles covering the Dome of the Rock at Jerusalem are considerably earlier in date, having been added

by Sulaymān the Magnificent at the end of his reign.) The mosque of Bashīr (1653) is an example of seventeenth-century work in Aleppo.

Hitherto little has been said of the cities of the Egyptian Delta Alexandria, Rosetta, Damietta, and Maḥallat al-Kubrā. All of them contain a number of mosques and other monuments which bear an appearance of greater antiquity than they actually possess. This is partly caused by gradual decay, for they have not been tended with the same care as the buildings of Cairo. But it is due at least as much to the rustic character of their architecture, for apparently the craftsmen employed in these provincial towns practised what they had learned from their grandfathers rather than the new-fangled fashions from Stamboul. Rosetta, for example, was practically rebuilt in its present form during the seventeenth and eighteenth centuries, and neither Damietta² nor Alexandria offers anything of importance of an earlier

¹ Illustrated in M. Saladin's *Art musulman*, p. 515.

² M. Saladin (p. 158) illustrates a door-

way from Maḥallat al-Kubrā which he dates late in the fifteenth century.

date.¹ The characteristics of the 'Delta' architecture are a great simplicity of design, a bold treatment of minarets (Figs. 113, 139, 140), walls usually covered with stucco, somewhat rustic woodwork, occasional *faience*, and, especially, the use of red and black brickwork in porches and other features (Figs.

144, 145). These bricks are formed into borders and geometrical patterns, such as lozenges, in the same way that they were used in Flanders and East Anglia, but the inevitable stalactite ornament was often introduced into brick porches, as shown in the illustration (Fig. 144) of the principal porch of the mosque of al-Baḥr at Damietta. This may be compared with my other photograph (Fig. 145) of a purely brick portal at the mosque of 'Alī al-Maḥallī (1721²) at Rosetta, with an almost identical one³ in the mosque of Muḥammad al-'Abbāsī (1809) at Rosetta, and with an example illustrated in M. Saladin's book⁴ at Maḥallat al-Kubrā. In the reports of the *Comité* for 1896 and 1912 may be seen other examples, from the

mosque of Shaykh Toka (1727) at Rosetta, and from the mosques of Terbana (1684²), Abu'l-'Abbās (1767²) and 'Alī Bāy at Alexandria. A comparison of these dates shows that this vernacular Delta style continued right up to the beginning of the nineteenth century without any great change or break in the tradition. Examples of large congrega-

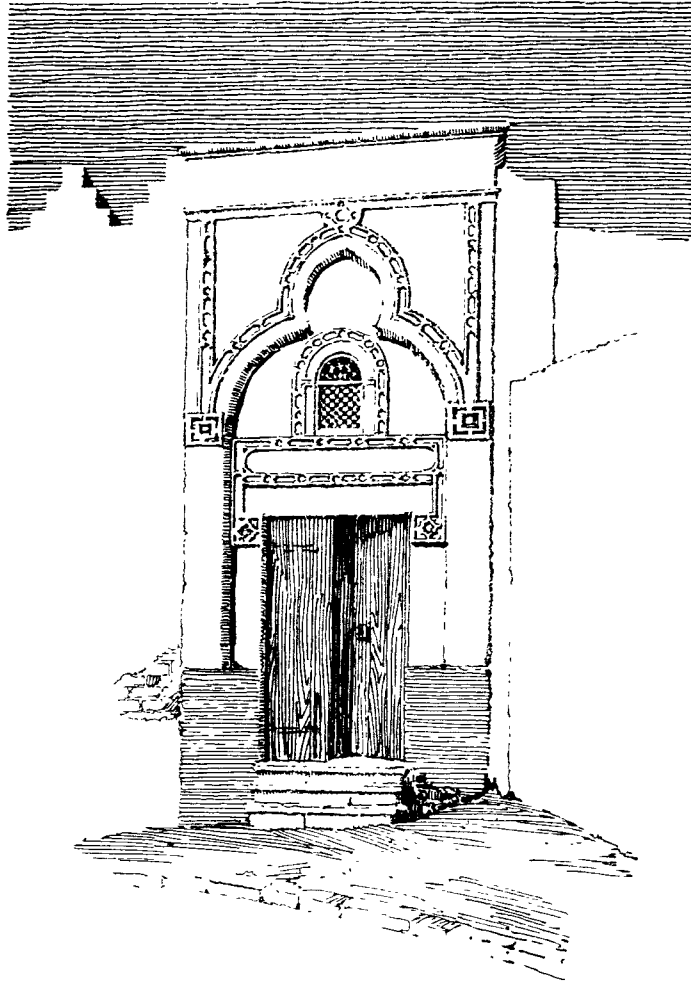


FIG. 149. ALEXANDRIA: DOORWAY IN THE OLD TOWN. M.S.B. del.

¹ See p. 121 above, for mosque of al-Mu'ini at Damietta.

² For these dates I am indebted to

Mr. E. M. Forster.

³ See report of *Comité* for 1899.

⁴ Saladin, *op. cit.*, p. 158.

tional mosques are also found in the Delta towns at this period, such of those of Abu'l-Ma'ātī at Damietta and Zaghlūl or Sakhlun (about 1600¹) at Rosetta. In the former case antique columns are used for the arcades, in the latter a range of brick piers round the *ṣahn* and antique columns for the inner arcades. These large congregational mosques, occurring centuries after the last instance in Cairo, make one wonder if their foundation is not earlier than is commonly supposed. But unfortunately we have no complete chronology of the Turkish provincial monuments of Egypt such as Creswell has provided up to the year 1517, and Mrs. Devonshire, in a less elaborate form,² for the Turkish monuments of Cairo after that date. Both Damietta and Rosetta possess interesting minarets of the Turkish period, those of the mosques of al-Baḥr and az-Za'farānī (Fig. 139) in the former town being the most striking.

In Palestine and Syria one finds a provincial tradition, appearing especially in the design of minarets of a style quite different from the Turkish 'pencil' type. Examples of these may be seen in the mosques of al-Mu'allāq and as-Sanjakdār at Damascus, as well as in some of the mosques at Gaza. In these cities stone was chiefly used, and the distinctive feature of the minarets was a projecting top stage with a sloping roof, giving an effect not unlike the upper part of an old-fashioned lighthouse. Other Damascus mosques later than the days of Sulaymān the Magnificent are those of as-Sināniyyah (1583), famous for its tiles, and Darwishiyyah (1571).

Returning to Cairo at the beginning of the eighteenth century we find that the craze for mosque-building still continued, though by that date the city must have been amply furnished with religious buildings of every sort. But though a gradual decadence set in with the Turkish conquest, it was a leisurely process at best, and the Pāshā from Constantinople who had replaced the mameluke Sultan only differed from the latter in having a slighter hold on the reins of government. His deputy, the Katkhudā, was the active head of the state. The normal quarrels and intrigues of the mamelukes were diversified collisions with the 'Azabs or Janissaries, the government troops. Life in Cairo seems to have been as gay and luxurious as ever for the rich, and architecture in various forms was still produced. Several mosques of some size were erected, such as those of 'Uthmān Katkhudā (1734) in the Sharia 'Abdīn (close to the big modern hotels), of Muḥammad Abu' dh-Dhahab (1773) near al-Azhar, and the Takiyyah of Sultan Maḥmūd (1750). These still preserved the characteristics of the Turkish architecture seen in the mosques of Sinān Pāshā and of al-Malikah Ṣafiyyah, already described.

¹ For these dates I am indebted to Mr. E. M. Forster.

² Mrs. R. L. Devonshire, *Rambles in Cairo*. Chronology at end.

But a new influence was introduced by 'Abd ar-Rahmān Katkhudā, son of the 'Uthmān mentioned above, who for a brief period (from 1768 to 1773) succeeded in making himself king of Egypt. This enterprising ruler carried out a large amount of architectural restoration, especially in the mosque of al-Azhar, where his new entrance portal is well known to tourists. On the whole the style of this work remains Saracenic and Turkish in spirit, hardly tinged with the French rococo influence that penetrated the country, by way of Constantinople, a few years later. One of my photographs (Fig. 183) illustrates a typical example of this work from a small mosque in an alley near the Muski, and perhaps the most successful of his new buildings, though the smallest, is the beautiful little *sabīl-kuttāb* (Fig. 154) in the Bayn al-Qasrayn (1744) close to the mosque of Barqūq *intra muros*. His manifold building activities are described in detail by Lane-Poole.¹ One more small mosque remains to be described, that of al-Burdaynī (Figs. 151, 152, 214). The exterior has no features of interest, presenting the same characteristics in façade and minaret as the later work of Qāyt-Bāy, but there is a deterioration throughout. The interior (Fig. 152) is a blaze of colour. Though the outline of the plan is irregular, possessing no charm of grouping or arrangement, the walls and ceilings have been decorated with a prodigal extravagance. To a height of nine or ten feet the walls are inlaid with marble, mother-of-pearl, and turquoise. The coving and beams of the timber ceiling are carved, coloured, and gilt. The *mimbar* is of wood inlaid with mother-of-pearl and tortoiseshell, the *mihrāb* is lined with

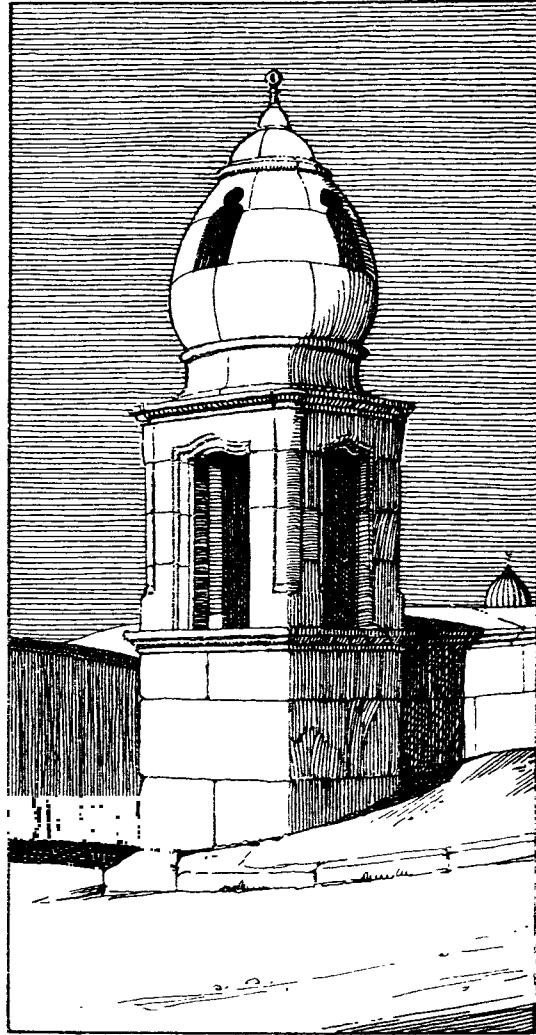


FIG. 150. CAIRO: NEAR THE CITADEL.
M.S.B. del.

¹ Herz Bey gives the date of this mosque as 1628, Baedeker as 1630, Saladin as 1628, and Mrs. Devonshire as 1790. Captain

Creswell informs me that the minaret is dated 1628-9, the ceiling 1694.

marbles, and has dwarf columns of turquoise. In spite of its late date, this mosque is Saracenic in all its details, and shows how persistently the tradition remained long after Turkish influence had penetrated the country.

In the latter part of the eighteenth century we find the first signs of obviously European architecture in Cairo, Damascus, and other towns (Fig. 170). It may be seen at its best in the sabils, where sometimes a touch of French rococo is very happily combined with Turkish and Saracenic *motifs*, and in a few years it spread over all branches of architecture. But the Saracenic style has not died even yet. Mosques are being erected in the streets of Cairo that carry on the building tradition of the mamelukes, and most of the crafts that made the Egyptian artists famous in the fifteenth century are still practised in the older quarters of this most fascinating of cities. Just as in India we have this still living tradition to contend with, so in Cairo it is most undesirable that an exotic style of European architecture should be forced on the country by those who know nothing of its wonderful past.

Yet the average soldier who became familiar with Cairo during the war probably only remembers one of its hundreds of mosques, the great vulgar pile that Muḥammad 'Alī erected on the Citadel in the nineteenth century (copied by a Greek architect from a model in Constantinople), with an interior like a gin-palace, and nothing to commend it except a wonderful silhouette that makes even the bitterest critic forget its failings and its foreign appearance as he sees its great dome and slender minarets against the sky.

BIBLIOGRAPHY FOR CHAPTER VIII

On Turkish Architecture in Brusa and Constantinople.

Diez and Glück. *Alt-Konstantinopel*. Munich, 1920.

Gurlitt, C. *Die Baukunst Constantinopels*. Berlin, 1912.

Montani Effendi. *L'Architecture ottomane*. Constantinople, 1873.

Parvillée, L. *Architecture et décoration turques au XV^e siècle*. Paris, 1874.

Reynolds, E. F. The Imperial Mosques of Constantinople, in *The Architectural Review*, vol. xxv. London, 1909.

Saladin, H. Chapter V of *L'Art musulman*. Paris, 1907.

On Architecture in Egypt after 1517.

General references in following books mentioned on pp. 18, 19: *Comité* (reports), Coste, Devonshire, Franz Pāshā, Jomard, Migeon, Prisse d'Avennes.



FIG. 151. CAIRO : MOSQUE OF AL-BURDAYNĪ. EXTERIOR

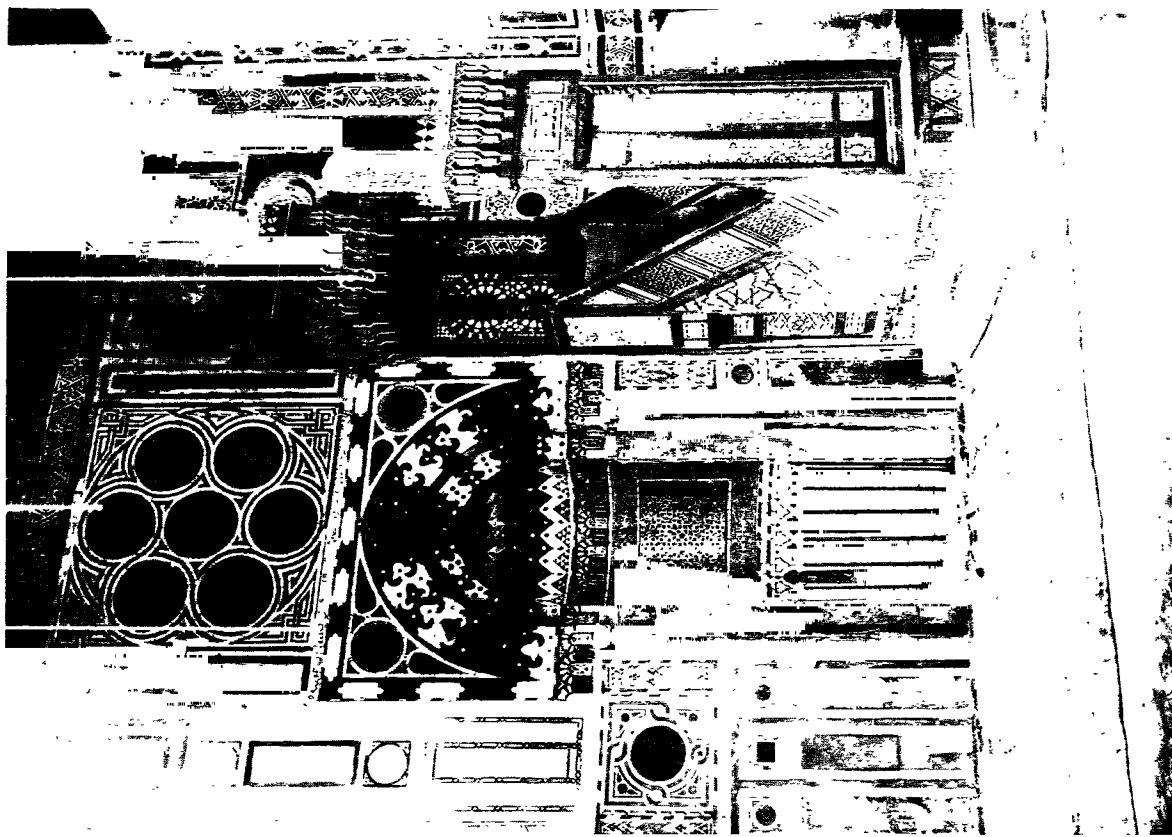


FIG. 152. CAIRO : MOSQUE OF AL-BURDAYNĪ. INTERIOR

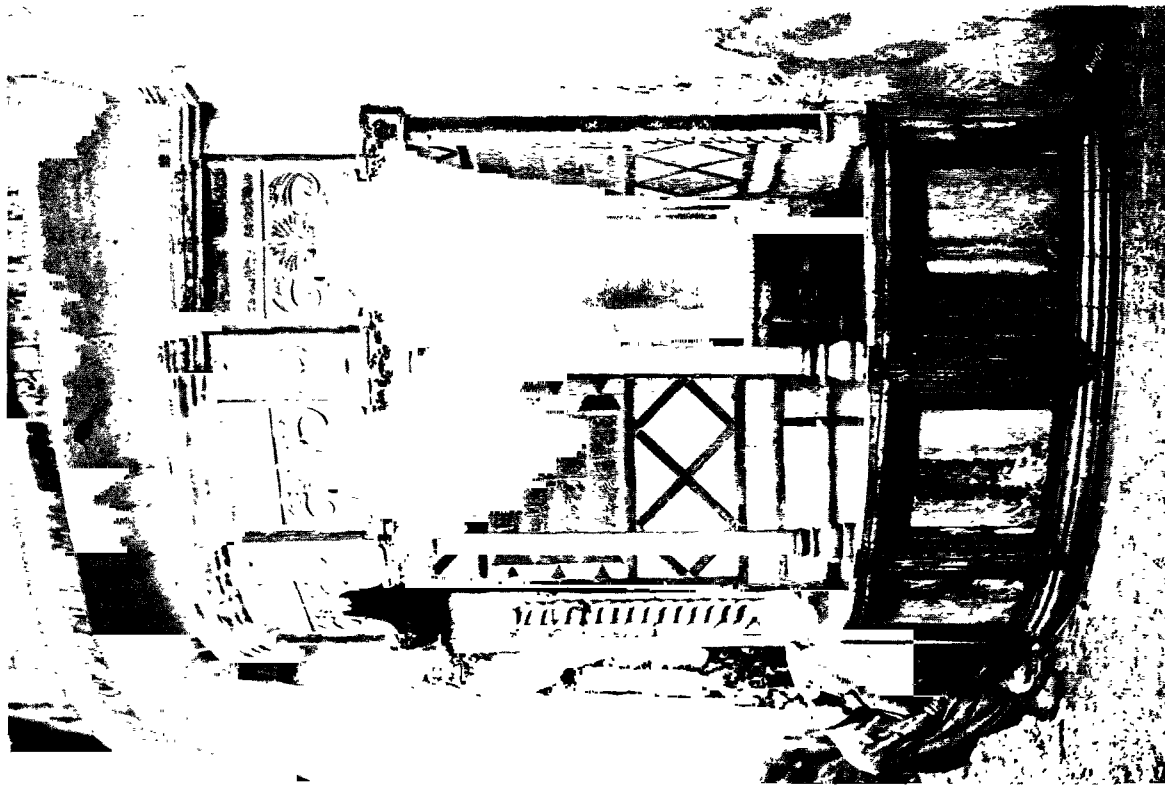


FIG. 153. DAMASCUS : A STREET FOUNTAIN
Eighteenth century

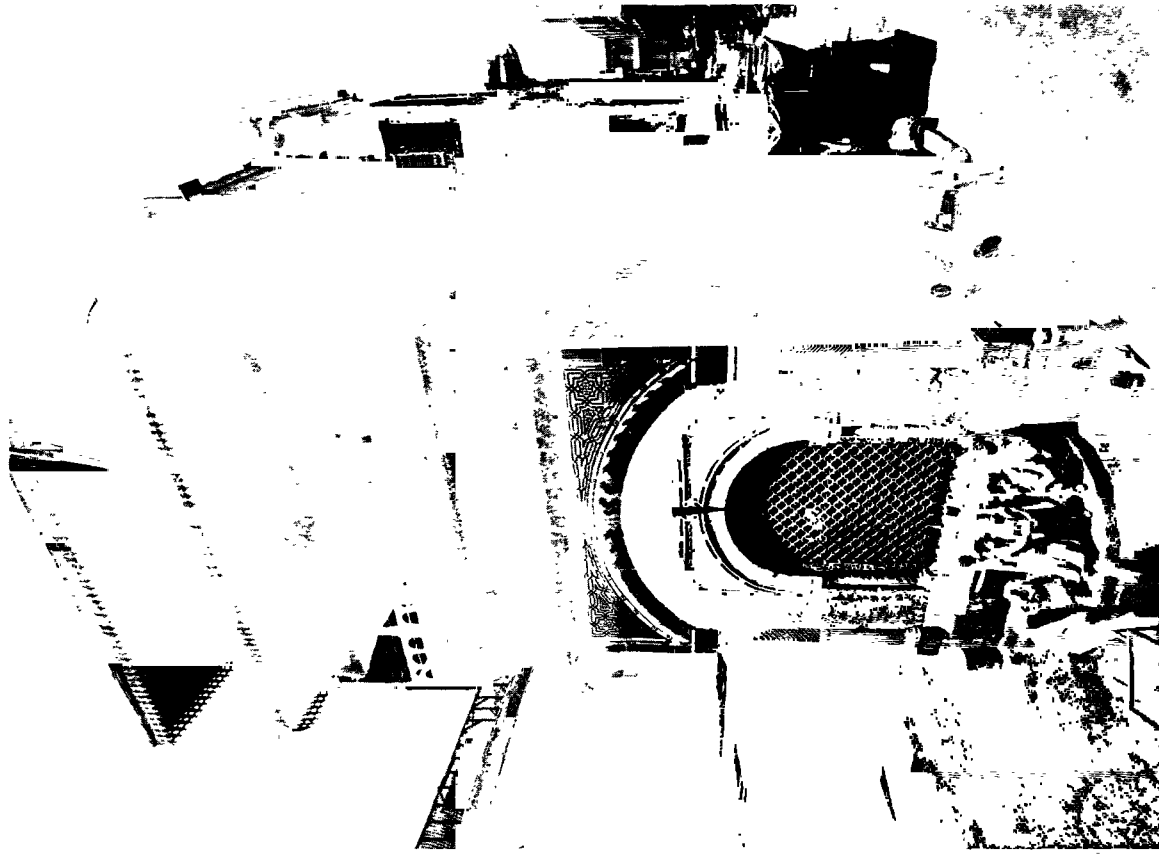


FIG. 154. CAIRO : SABİL OF 'ABD AR-RAHMĀN KATKHUDĀ

IX

DOMESTIC ARCHITECTURE

IN the previous chapters of this book we have seen how the primitive mosque, a rude structure of mud and palm-trunks, gradually developed all through the Middle Ages, generally under external influence. Assimilating features from Rome, Constantinople, and Persia, even from India itself, it became an elaborate structure of stone under the later Fātimids, and next underwent further changes as a result of intercourse between Egypt and the Crusaders. The mameluke sultans carried the architecture of the mosque to a still higher pitch, culminating in the wonderful buildings of Qāyt-Bāy and al-Ghūrī. Lastly, under Turkish dominion, we have seen the substitution of Byzantine domes and ‘pencil’ minarets for Saracenic motives, and the final decline of Saracenic art as a living style.

During all these centuries, the development of the dwelling-house in Egypt and Palestine was curiously dissimilar from that of the mosque. Of its earlier stages few examples remain, but there is surprisingly little difference between the oldest surviving houses (of the thirteenth and fourteenth centuries) and those built on traditional lines even so recently as last century. The reason for this apparent stagnation is not easy to find. The plan of the mosque was determined by the requirements of the Muslim faith, which has hardly been modified since its foundation. And though life in Cairo as Edward Lane described it in the fourth decade of last century was probably more mediaeval than in any country of Europe, there must have been certain alterations in the habits of the people—or at any rate of the upper classes—that one would expect to see reflected in the plan and style of their dwellings. Certainly no European country can show such a slight change in its domestic architecture from the Middle Ages to the present day.

The factors that have produced the typical Arab house, which one sees best in the older quarters of Cairo, are partly climatic, partly social, and partly religious. In the northern countries of Europe, houses are planned with a view to obtaining the maximum amount of sun and resisting rain and cold. In Egypt, where the annual rainfall is negligible even on the sea-coast and practically non-existent in parts of the interior, hardly any provision is made for resisting the weather. The sudden deluge of rain that may descend on Cairo once in a year plays havoc with many of its flimsy modern houses in the poorer districts and floods the

narrow streets of the older quarters. In Palestine and Syria, where the winter rains are heavy and prolonged, more precautions are taken in the construction of roofs, and the old streets of Jerusalem are paved with stone, but Damascus in mid-winter is a sea of mud. Yet the sun in Syria is hardly less powerful during the summer than in Cairo, so that the need for shade is equally important. The effect of this climatic factor on the Egyptian house is seen in the provision of an open *maq'ad* or belvedere facing the north, in the use of the *malqaf* or roof-ventilator to catch the cool north wind that sets in some hours after sunset in the hot months, and in the substitution of unglazed frames—filled with *mushrabiyyah* or ornamental wooden lattice-work—for glazed windows. The need for plentiful cold water, so vital as to be hardly comprehensible to an untravelled Briton, but a very real need to any man who has served in an Eastern campaign, is met by the placing in the open courtyard of a well or fountain, in larger houses by a similar though more ornamental fountain in the great reception-room, and in all houses by shaded and ventilated shelves in the *mushrabiyyah* windows for the porous clay jars in which the inhabitants of Egypt keep cold water for drinking. It is perhaps the remarkable suitability of the Egyptian house to the exacting demands of the climate that chiefly explains the slight change in its development through hundreds and even thousands of years, for on old frescoes at Thebes, more than thirty centuries old, may be seen pictures of houses provided with a *maq'ad* and a *malqaf*, facing north. There are some things in Egypt, the *shadūf*, the *sāqiyah*, and the sails of the Nile boats, that never change.

The extreme simplicity of Oriental domestic life is dictated partly by the great heat that prevails. Even a mediaeval castle in Europe contained a fair amount of portable furniture—tables, chairs, carved oak chests, and so on. There was usually an elaborately decorated fireplace with dogs. The walls were panelled with wood or hung with tapestry. The age of the Tudors saw a great advance in comfort and complexity, and by the times of the later Stuarts an approach had been made to modern conditions. Nowadays the word 'furniture' almost presupposes upholstery, while carpets and curtains are regarded as elementary necessities of life. It is only of recent years that tables, chairs, curtains, mirrors, fireplaces, wall-paper, ironmongery, sideboards, framed pictures, and 'knick-knacks', have been introduced into Cairo to disturb and vulgarize the austere simplicity of the Arab house. Originally it was designed to meet the requirements of an exacting climate. The rooms were stark naked, according to our European ideas, devoid of upholstery, carpeted only with a few mats of good design, and furnished only with divans. But they were cool.

The third factor dictating the arrangement of the Arab dwelling

is to be found in the various precepts of Islam. First among these is the injunction that the women of the household, veiled when they go abroad, should be invisible at home to all male visitors save their own men-folk. The rapid Europeanization of Cairo has made the veil little more than an added attraction to the charms of the Egyptian women, who display more than was ever intended by the founder of their faith. But the privacy of the older Arab house is so contrived that no modern innovations can effect much alteration. It is so built that a visitor on entry has to pass a doorkeeper, then an angle in the entrance-passage that prevents any outsider from gazing into the house, and lastly a locked door from the inner courtyard that gives reluctant access to the women's portion of the house. The rooms towards the street on the ground-floor are very seldom entered by women, but the windows are placed so high up in the wall that even a passer-by on camel-back cannot see within, and the *mushrabiyyah* bays and windows above allow the women to see out while not becoming visible themselves. The house is so planned that none of its windows look into any other house, nor can the courtyard be seen by any neighbours from their roofs or windows. From one point only is it possible to look into these jealously-guarded abodes, and that is from the top of a lofty mosque-minaret. It is for this reason alone that the office of *mu'adhdhin* came to be the prerogative of blind men. There was no great novelty in this segregation of women. It was practised among many primitive races, especially in the East, and both Greeks and Romans favoured it to some extent. But only among Muslim and other Oriental nations has it persisted so long, and in Cairo its fate is sealed.

The comparative scarcity of notable mediaeval houses surviving in Egypt and Palestine is due to some extent to superstition. It was generally held that the house in which any man had died was unlucky, and should never again be inhabited. For that cause the mameluke sultans and amirs preferred to build their palaces of ephemeral construction as compared with their mosques and city-walls, and to concentrate all their energies on decoration. The uncertainty of life during this period may surely have been a contributory factor, for the existence of the Cairo courtier was apt to be a very transient one, and if he never knew from day to day when an assassin might cut short his career, he was hardly likely to waste much time on building his own house. It was part of his fatalism to take no thought for the morrow.

Before proceeding to a detailed examination of the historical development of the Arab dwelling, we may well pause to visit an imaginary house in Cairo, such as has been described at various times by competent writers, and such as may still be found in odd corners of that wonderful city, preserved, without serious modification from its

original state, by the care of the *Comité* or by the zeal of some cultured owner.

The exterior of the building is bare in the extreme. One side only, as a rule, faces a street, and that street is narrow. In such an example as the so-called 'House of the Qādī',¹ only the elaborate *maq'ad* or belvedere remains, and that formerly stood within an enclosed court, not, as now, on a wide thoroughfare. This severity of external treatment is due partly to the constant faction-fights among the mamlukes that often made the streets of Cairo dangerous, partly to the narrowness of the street itself—giving no view and allowing of little fresh air—and partly to the concentration of all decoration in the private part of the house, invariably grouped round an internal court. But in spite of modern ideas of hygiene there is something to be said for these narrow alleys between towering houses that nearly touch overhead. Except at midday, they are always shady and cool. Moreover, they protect one to some extent from the *khamṣīn* wind and the sandstorms that sometimes sweep through the city. The wide boulevards at Khartoum, laid out in accordance with British ideas, offer little protection against either sun or sandstorm.

The lower part of the external walls is faced with the fine limestone obtained from the neighbouring Muqāṭṭam hills, carefully dressed and with fairly narrow joints. The upper part, except in the earliest examples, is of lighter construction, usually of brickwork filled in between wooden posts, or, as we call it, 'bricknogging'. This frequently overhangs the stone substructure, and in such cases is supported by great stone corbels or wooden brackets, boldly designed and placed at short intervals. These brackets form the most picturesque feature of many a Cairo street. The overhanging upper part is usually plastered in Cairo, though not, as we shall see later, in all other towns of Egypt. Sometimes the substructure is formed of alternate layers of red and white stone, as in the case of many of the mosques. This practice is discussed in the next chapter. From the main wall-face project, as a rule, one or more of the magnificent oriel windows, filled with *mushrabiyyah* or lattice, that have already been mentioned. These are characteristic of Saracenic architecture, but especially of the architecture of Cairo, where they are treated with a wealth of fancy and a beauty of design not found elsewhere in Egypt and Palestine. They may be said to fulfil a triple object. In the first place the word *mushrabiyyah* means a place where drink may be kept cool,² hence a place protected against the sun, yet well aired, for the greyish-white porous clay water-jars, known as *goolas* or *zias* and made chiefly in Upper Egypt. These vessels have the property of keeping water surprisingly cool in the

¹ See below, p. 156.

² The word 'sherbet', now anglicized, has the same derivation.

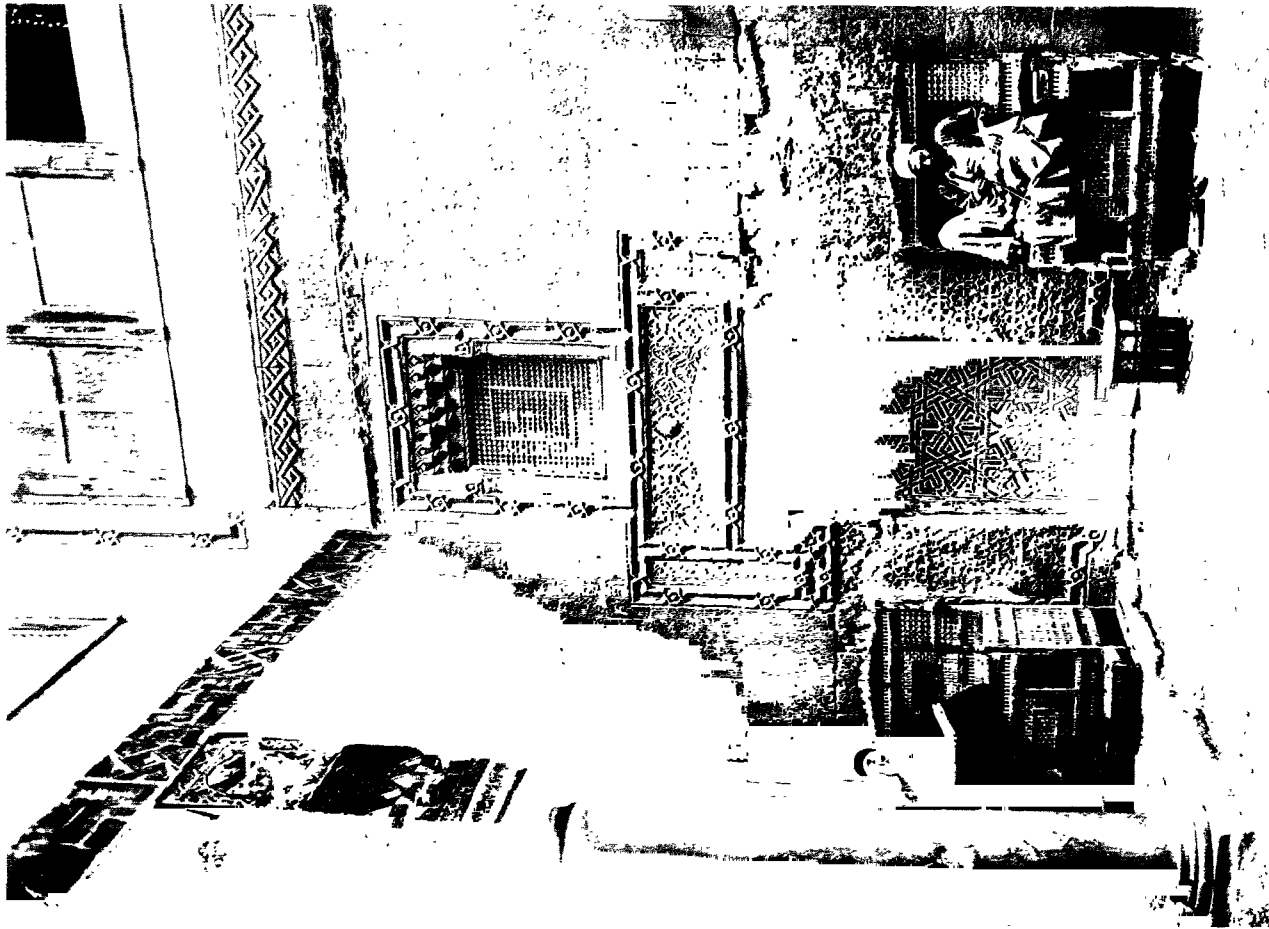


FIG. 155. CAIRO. The courtyard (*Hosh*) of an old house showing the alcove (*Tuktabosh*)

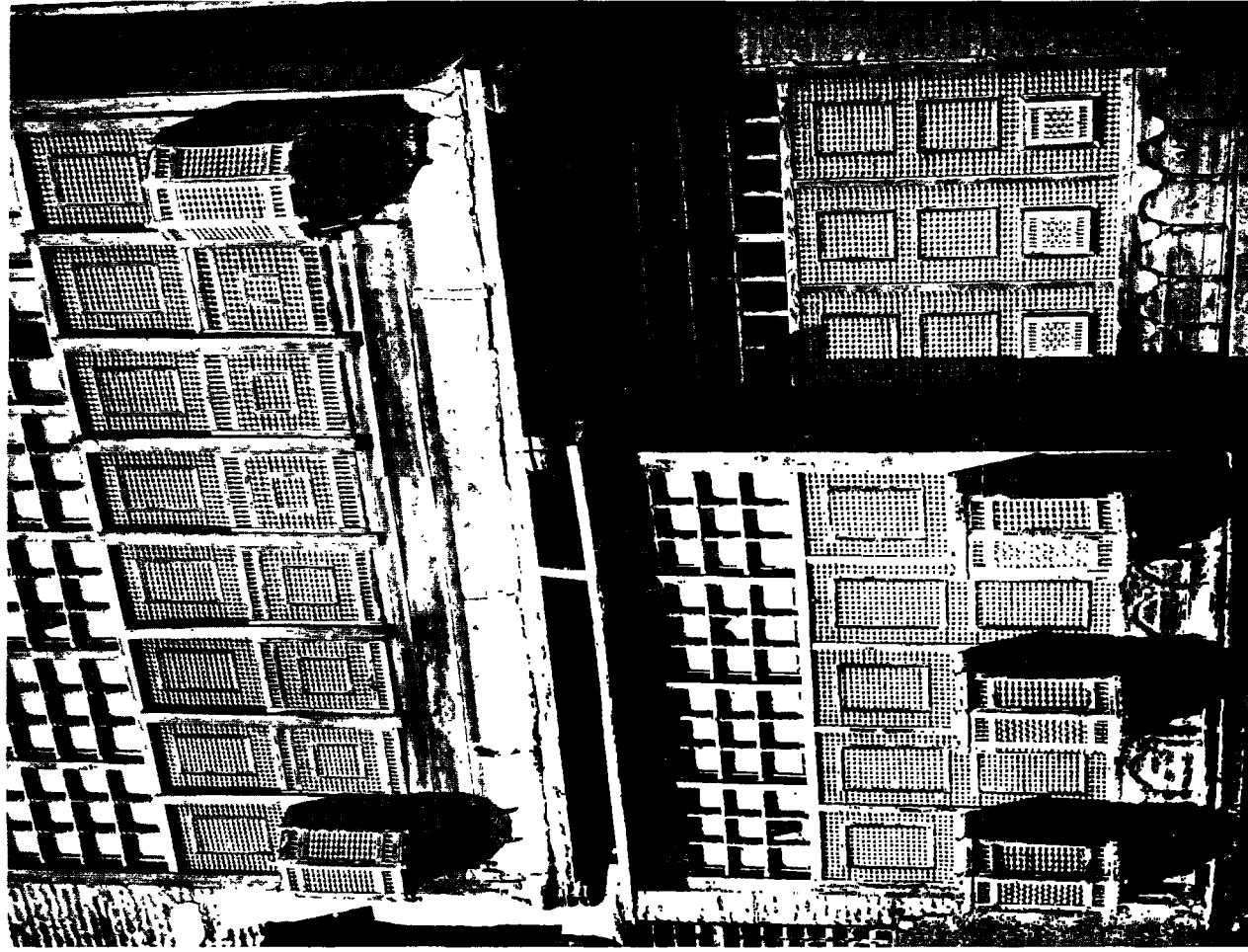


FIG. 156. CAIRO: windows of turned lattice-work (*Mashrabiyyah*) in an old house

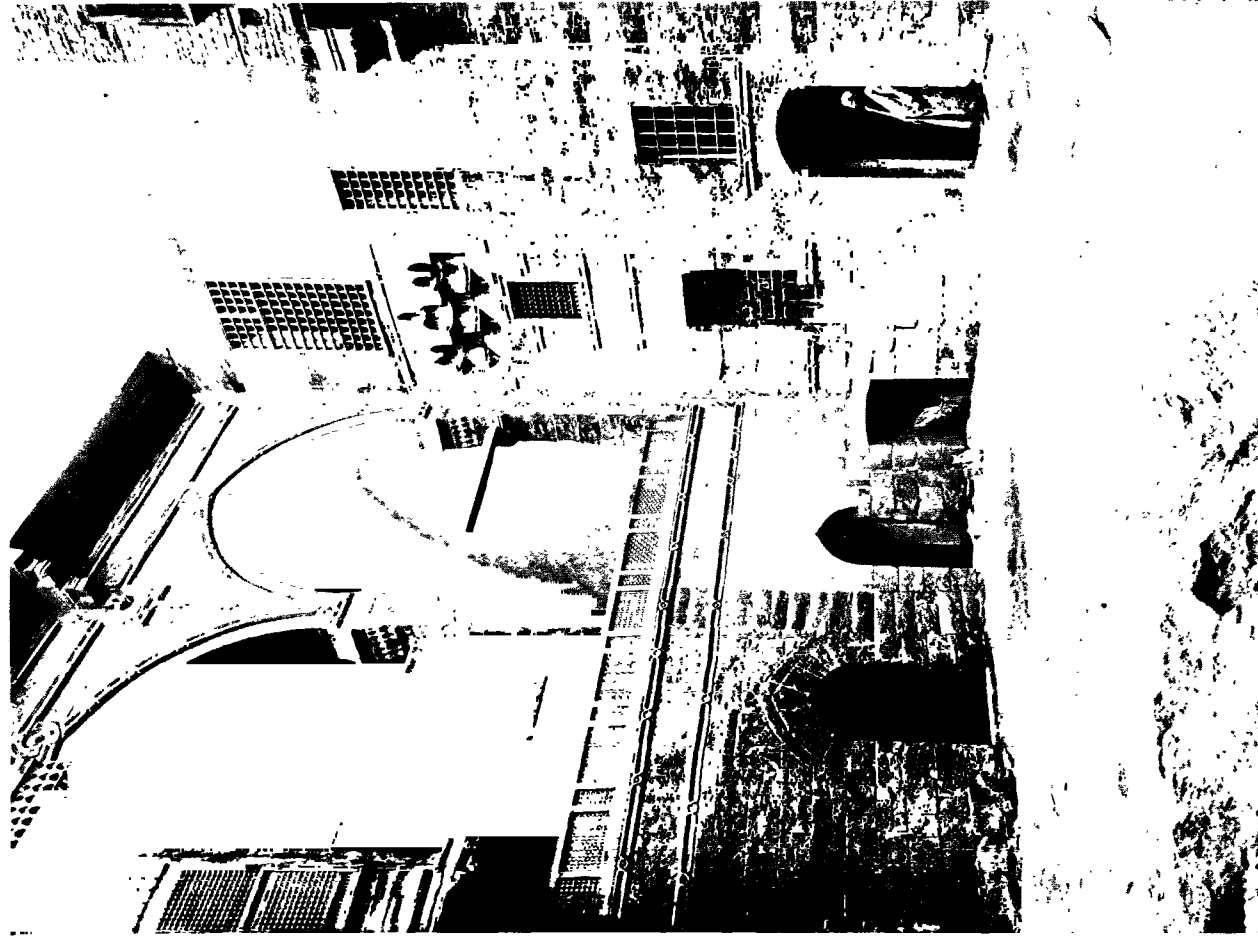


FIG. 157 The Courtyard (*Hosh*) and the Belvedere (*Mag'ad*)

CAIRO : HOUSE OF JAMĀL AD-DĪN



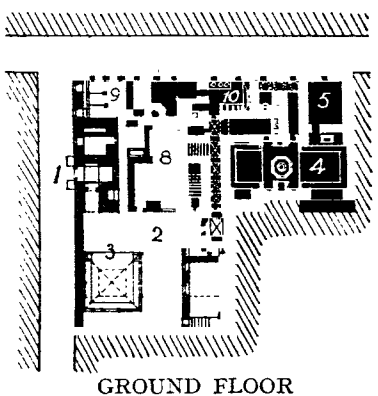
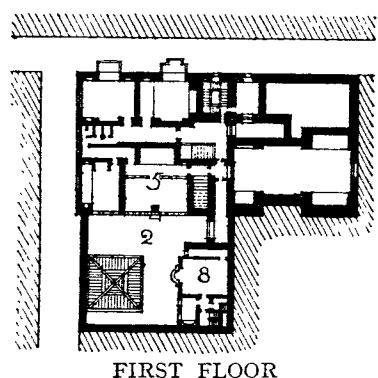
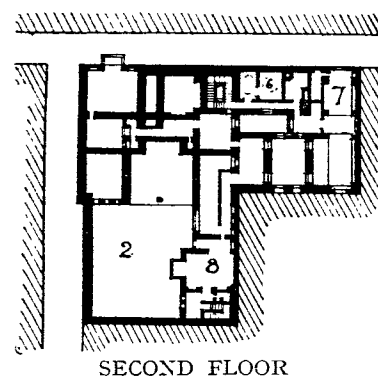
FIG. 158. The Great Hall (*Qā'ah*)

hottest weather, if shaded and placed near a current of air. They may stand in a large latticed oriel, or in a small oriel projecting from the front or ends of a larger one, or even from a large lattice flush with the wall, this latter type being by no means uncommon. The second object fulfilled by these *mushrabiyyah* windows is to prevent passers-by, or neighbours in houses across the street, observing the women of the household within. The lattice is formed of small turned bars of wood, often of great beauty of design, arranged in squares or diagonally, the distance between the centres of each pair of bars varying from $1\frac{1}{4}$ in. to $1\frac{3}{4}$ in. This spacing fulfils the third object of the lattice, for it enables the women within to watch the traffic in the street below, and the frequent processions and street-ceremonies that in former times were almost the only events in the world without that penetrated to the eyes of the ladies of the *harīm*. Where the *mushrabiyyah* takes the form of an oriel, there is frequently a flat lattice above it. Windows are not, however, always of this form, and sometimes gratings of iron or of turned wood bars are used, approximating in size to the leaded lights of houses in England in Elizabethan days.

The top of the façade to the street is usually quite plain, but occasionally one finds a crested battlement such as was used in mosques of the fifteenth and sixteenth centuries. The roof is invariably flat, and is constructed of palm trunks covered with cement or mud. The chief feature of most façades is the entrance doorway, often decorated with the arms of the owner, with a verse from the Qur'ān in ornamental characters, or occasionally with a stuffed animal such as a young elephant or a crocodile. The latter objects are supposed to ward off ill-luck, and thus show a superstition akin to the fear of the 'evil eye' in Southern Italy and other lands. These doorways may have pointed heads with a fluted moulding round them, a stalactited head as is so often found in the porches of the mameluke mosques, or, most commonly of all, a square or segmental head formed of elaborately joggled voussoirs surrounded by a delicate interlacing moulding. These architectural details are dealt with in later chapters of this book, as are the various forms of panelling, often of admirable design, used for the door itself. The characteristic fastening of the door is a wooden latch, called a *dabbah*, of absurdly primitive design, with small iron pins that slip into small holes.¹ A mediaeval burglar would have no difficulty in dealing with so childish a contrivance, and Edward Lane naïvely observes—'It is not difficult to pick this kind of lock'. At nights the door is secured by another mediaeval survival, a heavy bar right across its width. Outside the doorway there is frequently a mounting-step and an iron ring for tying up one's mount.

¹ See excellent illustration in Lane's *Modern Egyptians* (1914 edition), p. 20.

Entering the house then, by fair means or foul, we find further access guarded by the *bawwāb*—a doorkeeper or concierge—who sits just inside the doorway on a stone or wooden bench (a *maṣṭaba*) in the narrow and dark entrance passage. This passage always has a right-angled turn in its length before it reaches the inner courtyard, so that instead of a glimpse of a cool *cortile* with sunlit orange-trees within, such as so often provides a delightful surprise in Roman or Genoese streets, our prying gaze is confronted with a frowning blank wall of stone.



FIGS. 159-161. CAIRO: PLANS OF A TYPICAL HOUSE. (After Lane-Poole.)

1 Entrance, 2 Court, 3 Maq'ad, 4 Chief mandarrah, 5 Small mandarrah, 6 Bath, 7 Harim, 8 Strangers' Room, 9 Stable, 10 Kitchen.

as we understand the term. For ordinary business, visitors of no great social standing are received in a room or alcove called the *takhtabosh*. This is a square recess of which one side, towards the court, is open,

If our credentials are good, we pass the *bawwāb* and the angle in the passage, and find ourselves in the real heart of the house, the *hosh* or inner courtyard. No rule can be given for the shape or dimensions of this court, but it is often approximately square. On the ceremonial occasions that occur in better-class Egyptian households a great tent-cloth or awning, with red and blue patterns on a cream or buff ground, such as is still made near the Muski, is hung over the whole area of the court, and the turbaned guests of the host sit round with cigarettes or pipes to listen to flowery oriental oratory or the curious syncopated music of the country. No women are ever present in the court on such occasions, or, indeed, on any occasions when a stranger might be admitted. In the centre of the court is often a well, whence the brackish water of the Nile that percolates under all Cairo is drawn, or occasionally an ornamental fountain occupies this position. Round the court are grouped the servants' apartments (such as they are), and the stalls for any animals—horses, donkeys, even camels—that the owner may possess. The floor of this court is paved, but a tree—often a palm—frequently is found there, very seldom a garden

and in the middle of this side is usually found a pillar to carry the floor of the room above. The *takhtabosh* is furnished with a long wooden sofa or *dikkah*¹ on one, two, or three of its walls. It is usually one or two steps above the level of the court. The latter is sprinkled with water during the summer months.

Visitors (and by this is implied male visitors only) of any importance are, however, received in a much more pretentious apartment, the *mandarah* or reception-hall. This room is usually lofty, and in one important case at least its central portion rises to the height of three storeys. It consists of a central portion, the *dūrqa'ah*, into which one steps on entering the room, and one or more *liwānāt* or alcoves raised a foot or less above the level of the *dūrqa'ah*. Before one ascends into a *liwān*, on the courteous host's invitation, one removes one's shoes, for the floor of the *liwān* is carpeted. Where two or three *liwānāt* are found, as in the largest houses, the same effect is obtained as in the *madrasah* or cruciform mosque, for the ceiling of the *dūrqa'ah* is often higher than the rest. The ceilings of these state apartments are always their chief ornament, formed of heavy beams of dark-coloured wood placed about a foot apart, stop-chamfered, carved and gilt, or of geometrical interlacing panelling in intricate designs. The walls are usually quite bare, whitewashed and plastered. The floor is frequently paved with marble mosaic, and in the centre of the room is often an ornamental fountain, the *fisqiyyah*. In the walls are recesses for ornamental cupboards, usually shallow, with arched openings for vases, and delicately carved and panelled doors. There is sometimes a *suffah*, or marble or stone sideboard with an arcaded front, where are placed the few but often very beautiful vessels required for Arab hospitality. The only remaining articles of furniture are the seats. These in their simplest form consist of *dīwāns*, long stuffed mattresses on the floor, on which host and guests sit cross-legged. But sometimes these mattresses are placed on a frame of palm-sticks (*sarīr*), commonly known in Cairo as 'aḡaṣ-work' [*qafaṣ*], or on turned legs connected by a wooden frame-work and rails. On these *dīwāns* or seats are laid cushions. The *dīwān* is commonly about a yard wide, and the cushions about a yard square. Sometimes the *dīwān* is placed in a small recess or *sidillah*. In summer the floor of the *liwān* is covered with the palm-leaf matting, so largely used in the more sacred part of the mosque, and with mats laid upon it, but in winter carpets are added. Of movable furniture the only example generally used is a *kursī*, a small and very low polygonal table made of wood, often richly inlaid with mother-of-pearl, ivory, and ebony. The only utensils commonly found in such rooms are a brass basin and ewer for ablution, water-bottles, coffee-cups, and

¹ Cf. p. 27.

vessels containing perfume, all of which stand on the *suffah*. This somewhat detailed description of the appearance and contents of a *mandarah* indicates that in its simplicity it represents the taste of the architect rather than of the upholsterer.

Occasionally one finds in the *hosh* a small private mosque, containing a *mihrāb* niche, and separated from the courtyard by a latticed screen.

On an upper floor is situated a *maq'ad* or belvedere, in all houses of the larger sort. This is the most attractive feature of the Arab house, and closely resembles the *loggia* of an Italian palace. It is an open-air sitting-room or verandah, often eight or ten feet above the level of the *hosh*, and used as a reception-room for male visitors. Invariably it faces north for coolness' sake. The front to the *hosh* consists of an open arcade, usually of two, three, or four slightly horseshoe arches, stilted on stalactite capitals and supported by plain or spiral columns of limestone or marble. Between the bases of the columns is fixed a low balustrade of *mushrabiyyah* lattice. In the best examples the ceiling is lofty, coved, and richly carved and decorated, the favourite colours—if colour is used—being dark blue and gold. In some cases the *maq'ad* is sheltered from the sun by great eaves carried on carved brackets. A flight of steps leads up from the *hosh* to the *maq'ad*, the latter thus forming an ante-room to the more domestic parts of the house. And although the *maq'ad* is essentially a male apartment, the women of the *harīm* are occasionally permitted to watch the happenings therein through a *mushrabiyyah* communicating with one of their own rooms.

From the *maq'ad* the next step towards complete penetration of the house is the entry into the *qā'ah*, the largest chamber in the house. In nearly every case this is an imposing and very lofty hall, consisting, like the typical *mandarah* just described, of a central *dūrqa'ah*, which is higher than the two *liwānāt*. In the centre of the ceiling of the *dūrqa'ah* is a small lantern-cupola (*mamraq*) with *mushrabiyyah* sides, providing both light and ventilation. Other latticed openings are often found in the clerestory of the *dūrqa'ah* roof. The beams of the gorgeous ceiling are carried on great stalactite consoles. The walls are for the most part plain, decoration thus being concentrated in the ceiling where it is sufficiently distant not to trouble the eyes, but a high dado of coloured marbles is often found, and the floor is similarly paved. A central fountain is sometimes used, and if so is always ornamentally treated. Like the *mandarah*, the *qā'ah* contains latticed windows, a *suffah*, and recessed cupboards with elaborately panelled doors. Round the upper part of the walls runs a narrow shelf of wood, used to display the owner's china, and thus supplying a feminine note. In fact, the *qā'ah* corresponds to a modern drawing-room and at the same time is the Ultima Thule of favoured visitors, who may be scrutinized

through a lattice by the ladies of the household. This is the exact prototype of the grille in the Ladies' Gallery in the English House of Commons. The recent removal of the latter interesting survival shows that we are several years ahead of Muslim Cairo in that respect.

Except for the master's office or study adjoining the *maq'ad*, the remaining apartments on the upper floor constitute the *harim*. This misunderstood term properly includes both the women of the household and the rooms they occupy. It signifies 'set-apart', and simply means the private apartments used by the owner and his family, as opposed to the reception-rooms where male guests and business visitors are received. The word is even painted on the open portions of tramcars and the compartments of railway carriages that are reserved for women, thus implying no more than our 'Ladies only'. In a Cairo house a separate doorway usually leads from the *hosh* to the *harim*, this doorway being ornamentally treated. The smaller rooms are loftier than in this country, 14 ft. being a usual height. The wood used in their ceilings gives harbour to bugs, which are very prevalent in Cairo. The walls are often painted with clumsy representations of Mecca and other subjects, but these are of late workmanship. Until recently there were no rooms furnished as bedrooms in our sense of the word. The bed simply consisted of a mattress, resting on one of the palm-stick frames or crates already described, and was placed in a recess during the daytime, thus allowing the room to be used as a parlour. But in the matter of furniture, the upper and middle classes of Cairo have now adopted European ideas to a large extent, notably in the arrangement of their bedrooms.

The bathroom of a Cairo house has one notable characteristic, a small domed ceiling of cement, pierced with glazed circular openings for light. This practice is somehow reminiscent of Rome. The baths are heated in the same way as the public baths, and even those who have a private bathroom in their own home frequently resort to the public baths for purposes of amusement. Of the sanitary arrangements even in the larger houses the less said the better, though it may be remarked that it is perfectly possible to modernize the systems existing in the old Arab mansions without in any way infringing Muslim traditional custom. The historic houses of Cairo have no fire-places. Their inhabitants shiver round a brazier when the temperature in winter drops, and on the rare occasions when snow falls they suffer greatly. Of the means employed for ventilation mention has already been made. The *malqaf* or roof-ventilator resembles in appearance the top of a staircase leading on to the flat roof of a modern building in England, but with this difference, that it is not closed at the top by a door. It invariably faces north. Sometimes an open summer sitting-room is found in the *harim* of the house.

The only remaining features requiring notice here are seldom found except in the larger and older houses. The *makhba'* or strong-room is a hiding-place for treasure. The *bāb as-sirr* is an entrance to a convenient secret passage, connecting the house direct with the street, and thus allowing the master to escape from justice, vengeance, or assassination, or, conversely, according to the best authorities, to enable a paramour to enter the *harim*.

The earliest example of a mediaeval dwelling-house in Cairo dates from the thirteenth century, whereas the history of Arab art is six hundred years older, and even in the ninth and tenth centuries Cairo was a large and wealthy city. The recent excavations at Fustāt, the southern suburb of Cairo, founded in the middle of the seventh century by 'Amr,¹ give some slight indication of the most primitive dwellings. The publication of a full description of these houses, which is promised, will doubtless throw further light on the subject. Nāṣir i-Khusrau, a traveller of the eleventh century, visited Egypt during a period of tranquil prosperity. He states that the caliph himself owned twenty thousand houses, five and six storeys high, but these were let in tenements—the *rab'* mentioned later in this chapter. They were built of stone, not brick, and had good gardens. A French visitor at the beginning of the sixteenth century, just before the Turkish conquest, describes the house assigned by the sultan to his embassy, where he was an official.

'It contained six or seven beautiful halls, paved with marble, porphyry, serpentine, and other rare stones, inlaid with wonderful art; the walls were of similar mosaic, or painted with azure and rich colours; the doors inlaid with ivory, ebony, and other *singularitez*; yet the workmanship excelled the materials. Extensive gardens, filled with fruit-trees, surrounded the mansion, and were watered from the Nile night and morning by means of horses and oxen. Such a house, he exclaims, might have cost 80,000 seraps of gold; yet it was but one of a hundred thousand more beautiful still.'²

Turning from these hysterical exaggerations to concrete examples still existing, we find the earliest authenticated in the *Qā'ah* or 'Hall of Baybars', otherwise known as the 'House of 'Uthmān Katkhudā', but in reality the *qā'ah* of the now non-existent palace of Muḥammad Muḥibb ad-Dīn (1253). This building stands in the Sharia Bayt al-Qāḍī and was constituted '*waqf*' (i.e. a charitable trust) by 'Uthmān Katkhudā, a Turkish official in the eighteenth century. It was restored

¹ See p. 8.

² From Lane-Poole's *Art of the Saracens*, pp. 86-7, quoting Jehan Thénau.

by the *Comité* in 1911-12. It consists of a fine *qā'ah* over 50 ft. high, with a *dūrqa'ah* and two *liwānāt*, the former lit by a lantern, now unfortunately missing. Loggias, filled with *mushrabiyyah*, in the east and west wall allowed the ladies of the *harīm* to watch festivities down below. The chief features of the design are the stone lining of the interior, the fine stalactite corbels, and the sunk fountain or *fisqiyyah* in the floor. The latter is, however, comparatively modern¹ and was brought from another house.

The palace of the Amīr Yashbak² (commonly called Hosh Bardak) adjoins the great mosque of Sultan Ḥasan. An inscription states that it was restored by Yashbak in 1475-6, but Creswell³ adduces an elaborate argument to prove, on architectural grounds, that the original building must have been erected about the year 1337, thereby differing with M. van Berchem. Although largely ruined, it is still an imposing pile, and possesses one of the finest of the great porches with stalactite heads in all Cairo, comparable with the Bāb al-Qaṭṭānīn at Jerusalem. It is almost entirely built of dressed stone. The façade is featureless in its present state, but contains some remarkable groups of windows, such as might be made by piercing rudimentary tracery through a wall several feet thick. The ground floor, beyond the stalactited vestibule leading from the porch, consists of chambers with painted vaults of stone. On the upper floor is a gigantic *qā'ah* with vast horseshoe arches of stone.

The palace of the Amīr Bashtāk⁴ (1337 or 1339) had a great reputation in the days of the fifteenth-century historian, Maqrīzī, who states that from its topmost windows one could see the Nile, and praises the richness of its decoration. It lies in the Sharia an-Naḥḥāsīn, and is largely submerged by modern buildings. A modern staircase leads up to the remarkable *qā'ah*, which consists of a *dūrqa'ah* and four *liwānāt*. The larger of the two latter are on the east and west, and have noteworthy ceilings⁵ coffered in hexagons. The two smaller *liwānāt* are separated from the *dūrqa'ah* by a triple arcade of horseshoe arches. The plan of the whole *qā'ah* is thus cruciform. The walls are all lined with stone, and the *qā'ah* is in good condition, though the rest of the building is ruinous.

The porch, the only surviving part of the palace of the Amīr Manjak as-Silāḥdār,⁶ is situated in the Sūq aṣ-Ṣalāḥ near the Sharia

¹ See Mrs. Devonshire, *Rambles in Cairo*, p. 93, for good illustration and reference to this fountain.

² Illustrated with plans in report of *Comité* for 1894, and in Mrs. Devonshire (*op. cit.*), and Creswell (*op. cit.*).

³ Creswell, *A brief Chronology*, &c., p. 99.

⁴ See report of *Comité*, 1909, with illustrations (also report for 1902 for life of Bas Bashtāk).

⁵ Illustrated in above report, also in Mrs. Devonshire, *op. cit.*

⁶ See report of *Comité* for 1892, with illustrations.

Muḥammad 'Alī, and is dated 1346-7 by Creswell, who advances historical arguments in support. Although this porch or vestibule, with a domed roof supported on pendentives, is an interesting example of construction, it adds nothing to our knowledge of the plan of the mediaeval house.

Little more remains of the palace of the Amīr Taz (1352), near the great mosque of Sultan Ḥasan, though in this case the walls and the substructure of the *qā'ah* exist, incorporated in a modern school-building.

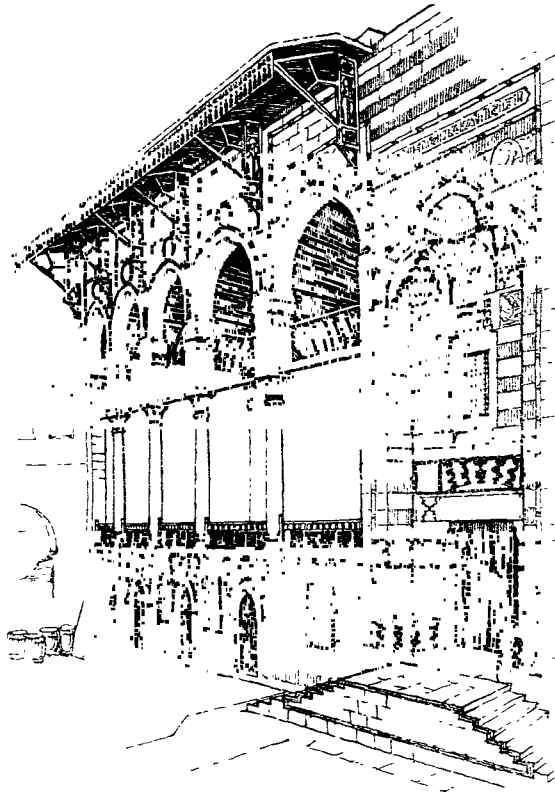


FIG. 162. CAIRO: THE SO-CALLED 'BAYT AL-QĀḌĪ'. M.S.B. del.

From this period there is a gap of over a century till we find dated examples of any importance, in the reign of the famous Sultan and builder, Qāyt-Bāy. But neither his palace (1485) near the mosque of al-Māridānī nor his *maq'ad* in the Eastern Cemetery (1474) has the interest or importance of the beautiful building that is commonly called the *Bayt al-Qāḍī*¹ ('House of the Cadi') but which is in reality the *maq'ad* of the palace of the Amīr Mamāy (1495), the remainder of the palace having disappeared. This gem of Saracenic domestic architecture (Fig. 162) lies close to the tomb-mosque of Qalāwūn in the most interesting quarter of all Cairo.

It derives its popular name from the court of the Qāḍī or judge, which sat here for over a hundred years. In the Napoleonic *Description de l'Égypte* it is so styled. It has been extensively restored in recent years by the *Comité*. The Amīr Mamāy was killed in 1496-7 as a result of faction-fights with a rival. The wide open space in front of the *maq'ad*, and extending thence towards the present police-station, probably represents the *hosh* of his great palace. Fragments of dressed masonry support this view. The *maq'ad* itself is 32 metres long and 11.20 metres high to the ceiling, with an arcade of five horseshoe arches—characteristically stilted—supporting

¹ Illustrated in reports of *Comité* for 1893 and 1902; also in Ebers' *Egypt*, vol. ii.

a ceiling unrivalled for beauty in all Cairo. The adjoining portal with its stalactite head precisely resembles others in contemporary mosques.

The House or Palace of the Amīr Khāyir-bak (c. 1501) adjoins the mausoleum¹ of the same *amīr*, to which it is connected by an arch. Creswell² gives historical reasons for the above date. The so-called house of Zaynab Khātūn,³ in the Hārat ad-Dawādārī, is of uncertain date, probably late in the eighteenth century, and consists of a handsome *qā'ah*, now approached by a separate staircase provided by the *Comité*. It also has a small but well-designed bathroom. Another *qā'ah* of note survives from the house of al-Haramayn,⁴ and is dated by the *Comité* at the end of the sixteenth century. It has a lofty *dūrqa'ah*, with a remarkable ceiling carried on stalactite consoles, and two *liwānāt*.

From the seventeenth century at least four important houses are known to survive in Cairo. First among these is the House of al-Jirīdiyyah⁵ (1631-2), which adjoins the entrance from the street to the famous mosque of Ibn Ṭūlūn. It is therefore familiar to tourists. Both internally and externally the walls are of dressed stonework. A *sabīl* occupies the external angle. The *hosh* is 8.10 metres square, and contains a *maq'ad* and some fine stalactite corbelling. The heads of the doors and windows are treated with great diversity.

The House of Jamāl ad-Dīn az-Zahabī⁶ (1637), in the Sharia Hosh Qadam, is the most perfect example of this period. The owner is believed to have been Master of a Merchants' Guild, as he is referred to as 'Shaykh of the Merchants'. It has been acquired and extensively restored by the *Comité*. One enters from the street through the usual discreet door and crooked passage into the *hosh*. Here has been placed a *fisqiyyah* or sunk fountain-basin from another building. On the ground-floor are a ruined *mandarah*, a well, and various unimportant rooms. The graceful *maq'ad* (Fig. 157) has horseshoe arches, and may be compared with the 'Bayt-al-Qādī' just described. The entrance to the *maq'ad* from the *hosh* is as usual through a fine doorway approached by a flight of steps, but in this case is in the wall at right angles to the arcade of the *maq'ad*. Through a lattice the women of the household can look into the *maq'ad* and the *hosh*. This house also contains a small bathroom with domed ceiling, but the most important room is the great *qā'ah* (Fig. 158) on the upper floor. This has a pavement of marble mosaic with steps up into the two *liwānāt*, and a marble dado about 4 ft. high. There are recesses for *dīwāns*, recessed and panelled cupboards, open ceilings with great stalactite consoles, and all the

¹ See p. 129.

² Creswell, *op. cit.*

³ Report of *Comité* for 1909; Mrs. Devonshire, *Rambles in Cairo*, p. 95.

⁴ Illustrated in report of *Comité* for 1909.

⁵ Illustrated in report of *Comité* for 1909.

⁶ Illustrated in Franz Pāshā, *Kairo*, and in Mrs. Devonshire, *Rambles in Cairo*.

characteristic features already mentioned as typical of the Cairo house. The House of Ridwān Bāy¹ (? 1654-5)² is situated in the Shoe-Bazaar, opposite the mosque of Maḥmūd al-Kurdī and south of the Bāb Zuwaylah. It was originally very extensive, but has been merged in the buildings of an elementary school, and only the *qā'ah* and the *maq'ad* are preserved. The latter resembles the 'Bayt al-Qāḍī', but has only three arches, and the columns beneath them are fluted spirally. The ground-floor rooms round the *hosh* are used as workshops, the upper rooms as tenements.

The so-called 'House of the Muftī' or of the Shaykh al-Mahdī³ is believed to have been built in 1704-5. Its name is derived from the Shaykh 'Abbāsī al-Mahdī, Grand Muftī of Egypt, who inhabited it during the nineteenth century. It has become familiar to students in England owing to having been measured in 1866 by Mr. R. Phené Spiers, who subsequently published his drawings in the *R. I. B. A. Transactions* for 1890. This house stands in the Sharia Khaliḡ al-Maṣrī which runs on the line of an old canal, now filled in. It consists of a very fine room, on the ground-floor, described by Mr. Spiers as a *mandarah* and by Herz Bey as a *qā'ah*. Unfortunately, since the former made his drawings, much of the beautiful marble and *faience* lining has gone, and other parts of the room have been badly treated. The size of the room is 31 by 10 metres. It has a lofty square *dūrqa'ah*, with three *liwānāt* of unequal size. The principal *liwān* is not, as one would expect, opposite the entrance, but on the right of the doorway, so that the plan is not symmetrical. The walls have the usual recesses, and in the centre of the *dūrqa'ah* is a sunk fountain of marble. In a recess in one wall is another fountain, formed with slopes and steps so that the sound of running water, so pleasant in a hot climate, is continually heard.

An old house in an alley off the Sharia al-Jamāliyyah, popularly known as the *Muzaffar Khān*⁴ or lodging for travellers (? 1779), contains good woodwork detail, especially panelled cupboards. Other interesting dwellings of this late period are the houses of Muḥammad al-Qaṣṣābī (1796) and Ibrāhīm al-Anṣārī⁵ (Fig. 163). The latter lies in a small *cul-de-sac* adjoining the Saniah Training College for Girls, and well repays a visit. The *qā'ah* on the upper floor is of no great interest, but the small *hosh* contains some *mushrabiyyah* projecting windows and a graceful doorway now blocked up in the Turkish style.

In Coste's large folio of drawings of Cairo buildings Plates 45

¹ Illustrated in report of *Comité* for 1912, in Ebers' *Egypt*, vol. ii, and in Franz Pāshā's *Kairo*.

² This date is uncertain. Franz Pāshā gives 1766.

³ Illustrated in report of *Comité* for 1912 ;

also in notes by R. Phené Spiers in *R. I. B. A. Transactions* for 1890.

⁴ Illustrated in Franz Pāshā, *Kairo*, and in Ebers' *Egypt*, vol. ii.

⁵ Illustrated in Mrs. Devonshire, *Rambles in Cairo*.

and 46 represent 'a dwelling-house belonging to a rich merchant in the Hauch Kada¹ quarter'. These illustrations have also been re-drawn by Mr. Spiers in the paper just quoted. They depict a house differing in one very important respect from any yet described, viz. in having a *mandarah*, as usual level with the *hosh* floor, so lofty that its central portion or *dūrqa'ah* rises 40 ft., and thus corresponds to the height of three floors of ordinary rooms, and practically takes the place of the *qā'ah* on the first floor.

Coste also illustrates two other very familiar types of Cairo houses, those in the Sharia at-Tabbāna renowned for their long row of simple projecting *mushrabiyyah* windows, and those originally lining the banks of that old canal that has become a busy thoroughfare with tram-lines. The latter type (Fig. 166) in many cases has a plan more resembling the European *casino* than the ordinary Arab dwelling-house.

There are many other old houses under the care of the *Comité* in Cairo, others again—not mentioned in this chapter—that have been described and illustrated in books on Saracenic architecture. But it is important that these buildings should be safeguarded for posterity at all costs, even if they may be at present in private ownership, and that such vandalism as is recorded by Prisse d'Avennes² or by Mr. Spiers³ should be rendered for ever impossible. The latter instances the famous French Consulate at Cairo, a veritable museum of objects torn from ancient buildings by Count St. Maurice during his period of office, many of them now in the South Kensington Museum. Given sufficient authority, the *Comité* established in Cairo to preserve these monuments should prevent any similar occurrences.⁴

¹ Possibly Hosh Qadam.

² Prisse d'Avennes, *L'Art arabe*, &c. 'Text' volume, p. 151.

³ R. Phené Spiers, *R. I. B. A. Transactions*, 1890, p. 237.

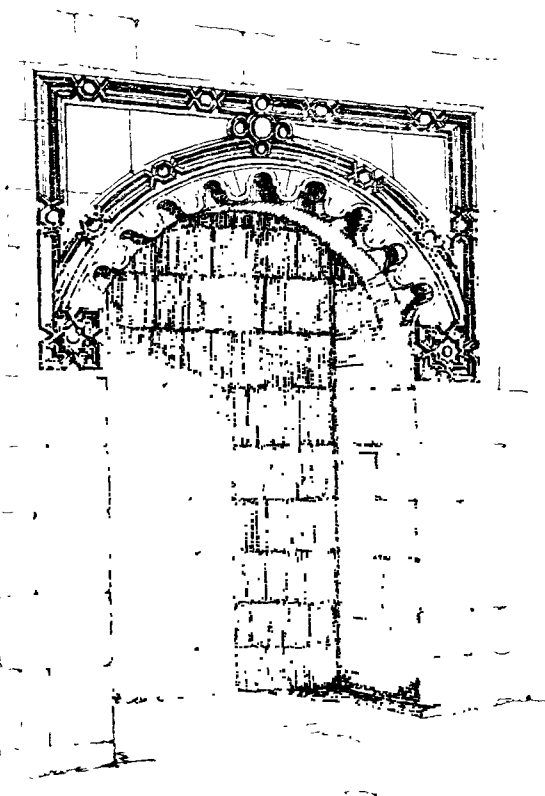


FIG. 163. CAIRO: HOUSE OF IBRĀHĪM AL-ANŠĀRĪ. DOORWAY. M.S.B. del.

⁴ See special report of Society for Protection of Ancient Buildings, 1883, on the measures adopted for preserving the Arab monuments of Egypt.

So far we have been concerned only with the town-houses of the capital of Egypt. Of suburban and country houses there is little to say, for no vestiges remain, and, indeed, during the turbulent days of the mamelukes few people lived outside the walled towns. But in the towns of the Delta a local style of domestic architecture was evolved, differing in many respects from that of Cairo. There is a difference in planning as well as in construction. At Damietta the house usually forms three sides of a square, with an entrance on the south leading into an open space with a covered reception-room adjoining on the ground-floor, open on one side to the court, and in some cases with an additional reception-room enclosed with walls and doors. At Rosetta there are generally shops and warehouses over the whole area of the ground-floor, and a separate entrance to a staircase leading to the residential floors above. In Rosetta especially, but also in Damietta, Manzalah, Maṣṣūrah, Samanud, Maḥallat al-Kubrā, Maṭariyyah, and in the oldest parts of the Arab town at Alexandria, the houses are lofty, often five floors in height, though of apparently light construction with overhanging storeys. The rooms resemble those of Cairene houses already described but they are furnished only with deep recesses for *dīwāns* instead of with large *ḥawānāt*, and the appointments generally are far less sumptuous. Occasionally one comes across a fine room, such as that in the House of 'Abdallāh Bāy Bakrī near the river at Damietta, which has a richly carved and painted ceiling. A beautiful panelled room from the House of al-Mayzūnī at Rosetta is exhibited in the Arab Museum at Cairo. There are local differences in the form of *mushrabiyyah* lattices. Thus, while in Rosetta and Alexandria these are made of turned woodwork, resembling that of Cairo though less elaborate, the window-openings of houses in Damietta, Maṣṣūrah, Maṭariyyah, &c., are filled with a trellis formed of delicately fretted strips of wood, equally attractive in a different way. Doors are often carved, and Damietta abounds in examples of fine geometrical door-panelling. Sometimes a small 'wicket' is provided in the centre of a large entrance-door. Ceilings are seldom constructed of the heavy carved beams found in the larger houses of Cairo, and are more usually formed of plain unpainted planks. Roofs are invariably flat, and parapets have no battlements or cresting.

But the chief characteristic of these old houses in the Delta towns is the almost invariable use of brickwork, though in Damietta and Alexandria, where stone is more easily obtained by river, one sometimes finds stone-facing for the lower part of the building. In Rosetta red and black bricks are used to form geometrical patterns, with narrow white joints. In some of the mosques in Rosetta and Alexandria this ornamental brickwork is very skilfully treated, especially in the entrance



FIG. 104. ROSETTA: A STREET

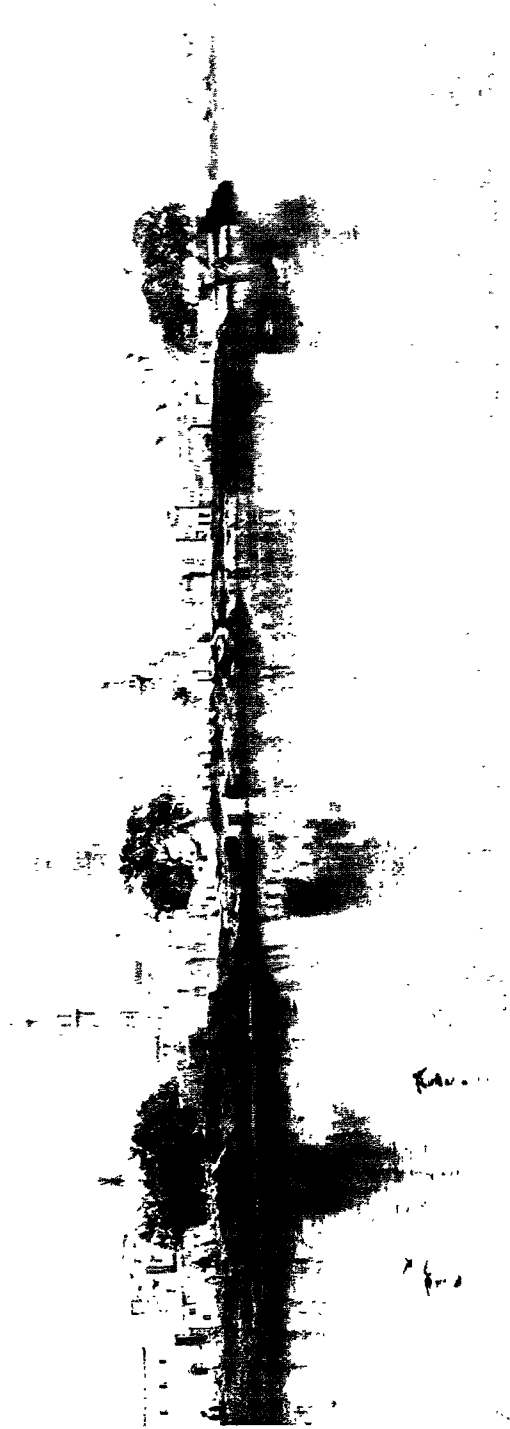


FIG. 165. A TYPICAL DELTA TOWN

porches (Fig. 145). In the houses it is less common, and almost always restricted to the ground-storey. The overhanging upper floors are 'bricknogged', and here the craftsmanship is of a rougher kind. Another feature, peculiar to Rosetta, is the use of antique columns at the angle of a building. These columns were obtainable in large quantities from the ancient city of Bolbitine, which lay on the site of the Arab town.

Among these houses at Rosetta may be mentioned the following examples as typical: the House of 'Alī al-Faṭā'irī¹ in the Ḥarat al-Ghazl, bearing the date 1620 on a carved beam built into the façade, and with an external staircase leading to the two doors of the men's and women's apartments respectively; the House of Aḥmad Āghā¹ in the Sharia al-Ghabashi on the west of the town, now partly buried in drift-sand; a panelled room in the House of al-Mayzūnī;¹ the House of Shaykh Ḥasan al-Khabbāz¹ in the Sharia Dahliz al-Mulk, with interesting lattice-windows; and the House of 'Uthmān Āghā² (1808) at a cross-roads, containing some very beautiful panelling.

In Asyūt, Madīnat al-Fayyūm, and other towns of Middle Egypt, there are few examples of any note.

In Palestine and Syria differences of climate and tradition are reflected in domestic architecture. The typical large house of the sixteenth, seventeenth, and eighteenth centuries in Damascus was luxuriously furnished. A great advance had been made from the days of the caliph Mu'āwiyah, who, when he had built a palace of sun-baked brick, is said to have shown it to a Byzantine envoy, who made this diplomatic criticism: 'The upper part will do for birds, and the lower for rats.' In later days Damascus acquired a reputation for the splendour of its dwellings, which were usually grouped round a large courtyard containing orange-trees and a large rectangular tank of water supplied from the river Barada. Mr. Spiers³ describes a typical house of moderate size, with such a courtyard, and on its south side an alcove corresponding to the *takhtabosh* of a Cairene house and facing north. The same feature is found in the old French Consulate and elsewhere. Opposite is the large reception-room, the equivalent of the Cairene *mandarah*, with three *liwānāt* and a central *dūrqa'ah*. On the west side of the courtyard is another room, with a kitchen adjoining. The *dūrqa'ah*, as in Cairo, is loftier than the *liwānāt*. The ceilings are treated with applied ornament in gesso, coloured and gilt, on the beams. Stone arches, resting on stalactite corbels, separate the *liwānāt* from the *dūrqa'ah*.

The house of 'Abdallāh Pāshā at Damascus, otherwise known

¹ See report of *Comité* for 1896.

³ R. P. Spiers, *op. cit.*

² See report of *Comité* for 1893.

as the Old French Consulate, is the most famous example in the city (Figs. 168 and 169). A comparison with the illustrations of the larger Cairo houses shows many striking differences, especially the great size of the internal court, and the striped stone arches separating the *liwān* from the *dūrqa'ah* in the reception-room. The *Maison Stambouli* (Fig. 170) is an instance of the more decadent style affected by the Turks, as opposed to the Saracenic tradition. The *maq'ad* appears to have been seldom, if ever, used in Syria.

Apart from dwelling-houses strictly so called, there are other classes of domestic buildings still to be described. Among these is the *rab'* or tenement-block. According to mediaeval writers, these were popular in Cairo even in the early days of Saracenic art, and were often six or more storeys high (see p. 154). There was nothing remarkable in the plan of the separate tenements, but Edward Lane mentions that in his day no man without a wife or a female slave was allowed to reside in them.

More important architecturally is the *okelle*, more correctly *wakālah*, commonly called a *khān* or caravanserai, such as one finds in every old and large city of Egypt and Palestine. It usually consists of a rectangular building surrounding an open court. The building itself is often many storeys high, and contains numerous lodgings for merchants visiting the city. These rooms are on the upper floors, with balconies facing the court, as in the old-fashioned inn in this country. (The George Inn at Southwark is an English equivalent.) The ground-floor towards the streets is occupied by shops, while vaulted stables line the courtyard. Though the general design of the building is usually severe, a feature is often made of a great entrance-porch in the centre of the façade.

Qāyt-Bāy erected two of the finest khāns in Cairo,¹ one near the Bāb an-Naṣr, dated 1480-1, the other² not far from the mosque of al-Azhar, dated 1477. The former is a large and handsome building in fairly good preservation. It was built and endowed for the benefit of the poorer inhabitants of Medina after the Sultan's return from a pilgrimage to that city, according to Ibn Iyās. The site was then occupied by the bazaars of the cross-bow merchants, and the vendor of wood and poultry.

The well-known Khān al-Khalīlī with its picturesque details was erected a little later, in the reign of al-Ghūrī. Other examples, displaying local characteristics already cited, are found in Damietta and Rosetta. In Damascus there are some magnificent khāns still in existence, by far the most remarkable being that of Asad Pāshā. This is a typical urban caravanserai, built after the Turkish conquest, yet distinctively Saracenic in feeling (Figs. 171 and 177). Its unusual plan, its striking interior with nine domes, pointed arches, and striped stonework—

¹ See report of *Comité* for 1902.

² See Coste's *Architecture arabe*, plate 42



FIG. 166. CAIRO. OLD HOUSES (TURKISH STYLE)

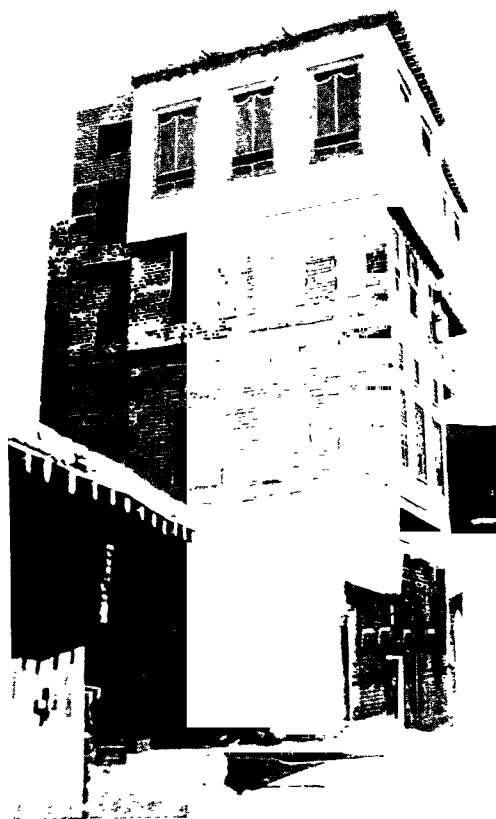


FIG. 167. ROSETTA. OLD HOUSE

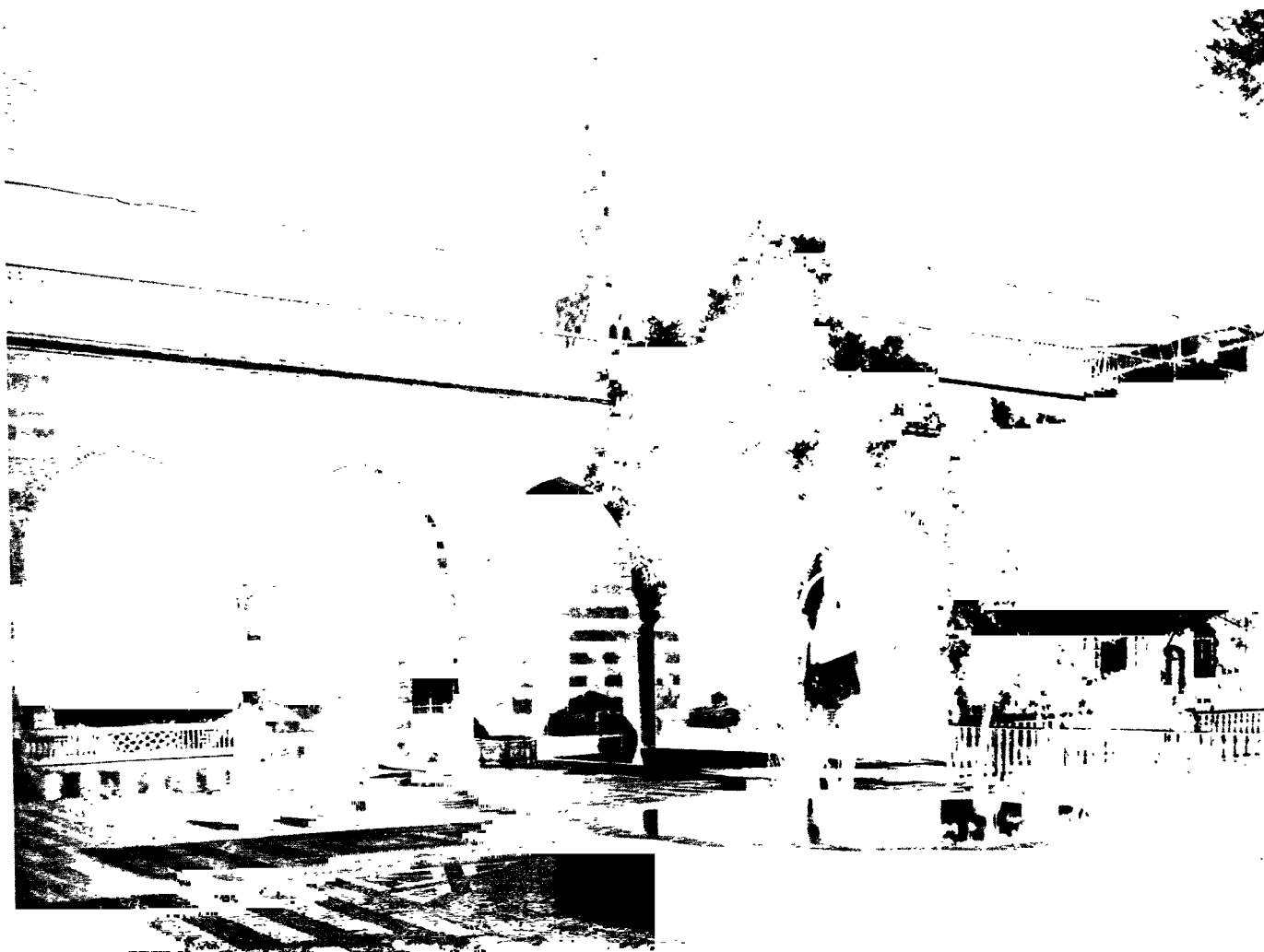


FIG. 168. DAMASCUS: HOUSE OF 'ABDALLAH PASHA. COURT

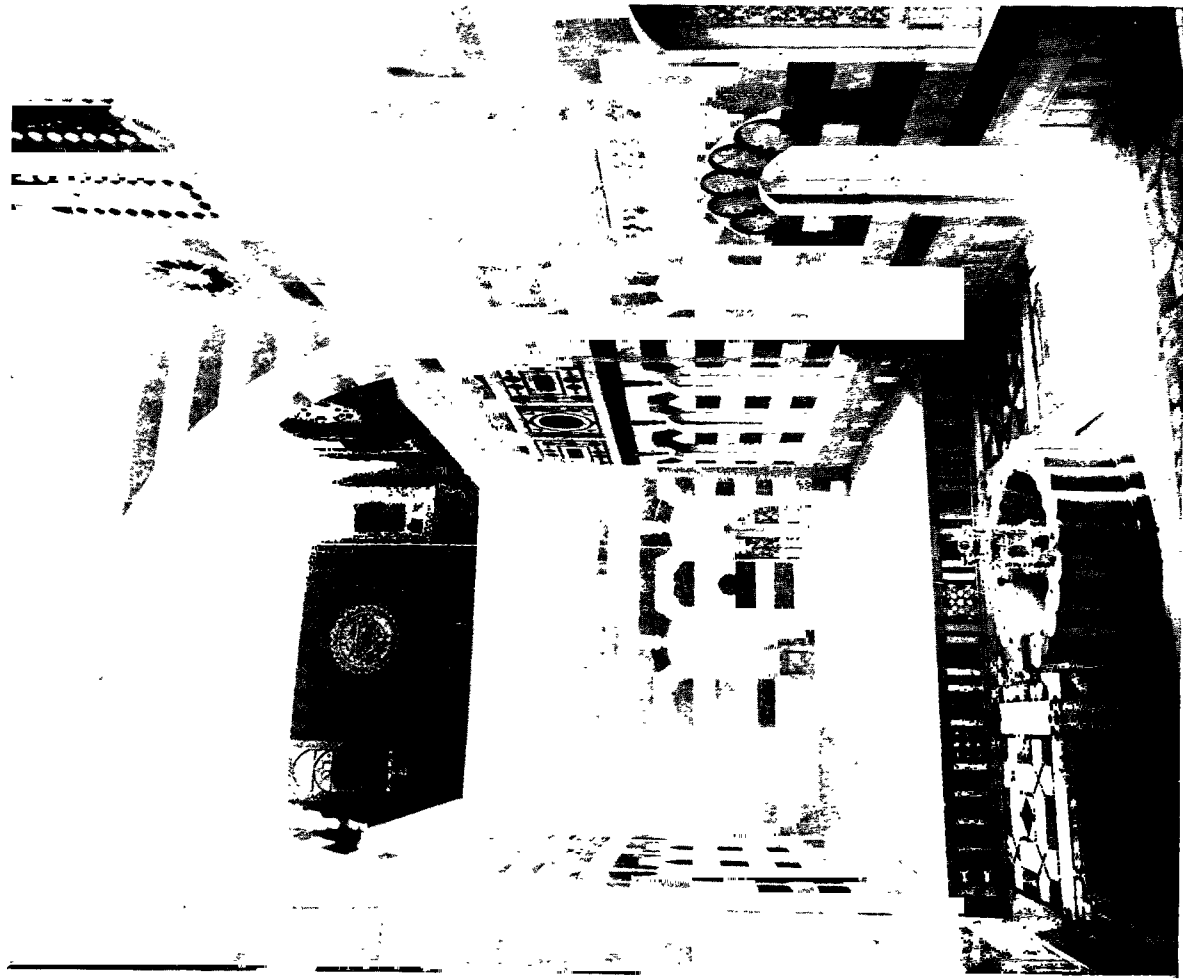


FIG. 169. DAMASCUS: house of 'Abdallāh Pāshā, the great hall

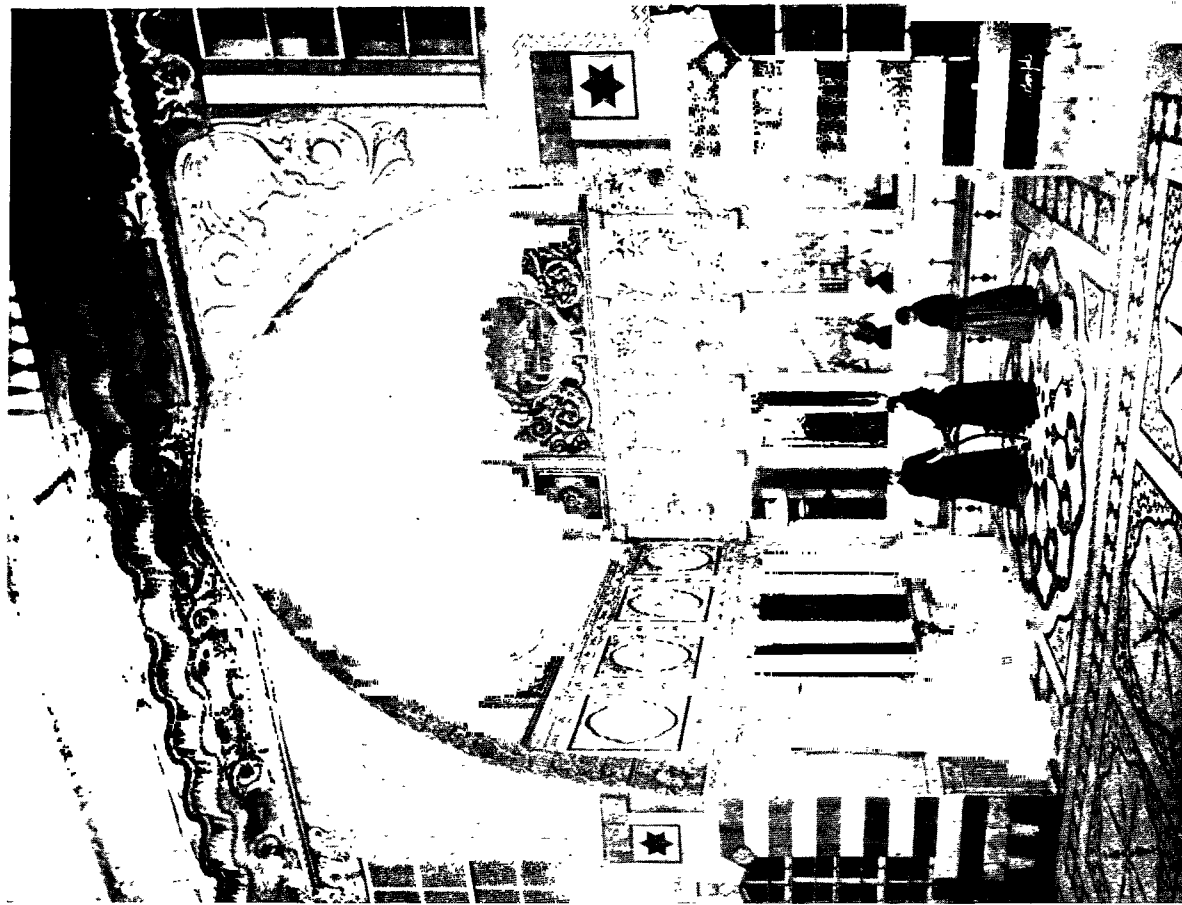


FIG. 170. DAMASCUS: house in the Turkish style

and its magnificent stalactite porch, make it one of the most interesting buildings of the city. Other noteworthy khāns in Damascus are those of Sulaymān Pāshā and al-Gumruk, both in the bazaar-quarter. Almost every town boasts one or more examples, thus at Gaza one finds the fine arched Khān az-Zayt, half destroyed during the war by the British bombardment, and by the hardly less devastating efforts at town-planning instituted by Jamāl Pāshā. But from the earliest days caravanserais were established at intervals along the great desert highways of Arabia and Syria. Many of these still remain to fulfil their original purpose.

The small shops that line the bazaars of Cairo and Damascus have varied very little in their arrangement for centuries. They are raised a little above street-level, and are only some 6 ft. square, so that the owner can reach almost every article on his shelves as he sits cross-legged on the floor. Many of them contain woodwork of delicate and beautiful design.¹

Lastly must be mentioned a type of building that is neither religious nor domestic, but that follows the general development, the public bath. Many examples exist in the larger towns, some of them very old,² but their arrangements have been well described in other works,³ and do not come within the scope of the present volume.

¹ See Gayet, *Art arabe*, p. 295; R. S. (porch only), fourteenth century. Poole in the *Builder*, 14th February 1885.

² In Cairo, Baths of Mu'ayyad, 1420; Egypt; Baedeker's *Syria and Palestine*; of al-Ghūrī, sixteenth century; of Bashtāk both with plans.

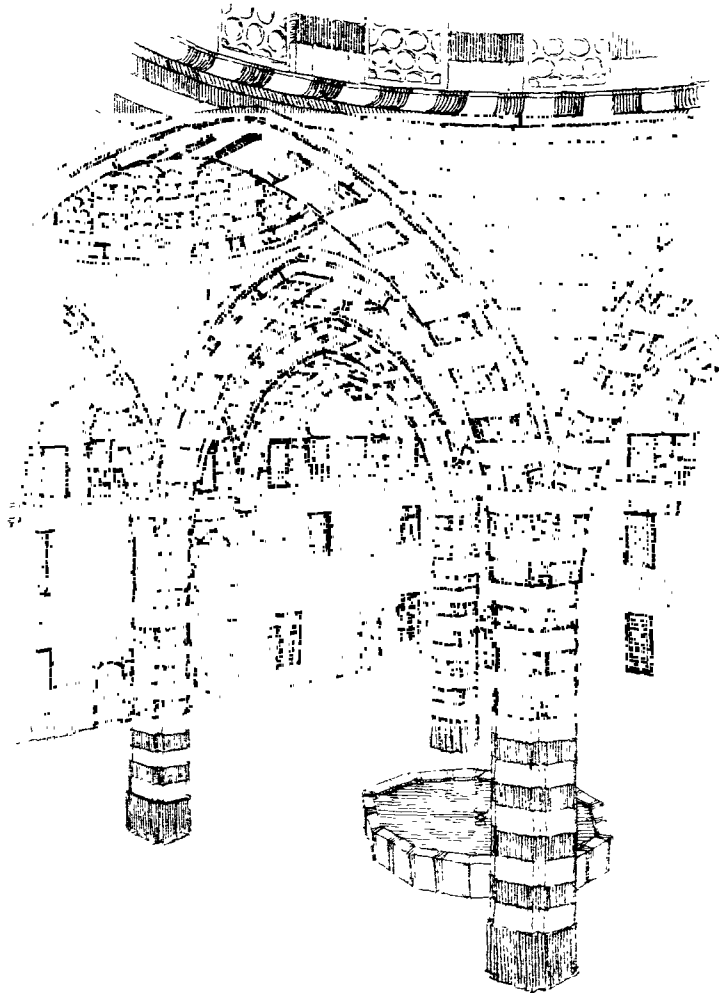


FIG. 171. DAMASCUS: KHĀN ASAD PĀSHĀ. INTERIOR.
M.S.B. del.

BIBLIOGRAPHY FOR CHAPTER IX

- Devonshire, Mrs. R. L. *Rambles in Cairo*. Cairo, 1917.
 Ebers, Georg. *Egypt* (trans. by Clara Bell). London, 1881.
 Gabriel. *Les Fouilles d'al Foustat et les origines de la maison arabe en Égypte*. Paris, 1921.
 d'Hulst, Count R., and R. Phené Spiers. The Arab House of Egypt, in *R. I. B. A. Transactions*, 1890. London, 1890.
 Lane, Edward. *The Manners and Customs of the Modern Egyptians* (first edition). London, 1836.
 Lane-Poole, S. *Social Life in Egypt*. London, 1883.
 Poole, R. S. Cairene Domestic Architecture (R.A. lecture, in *The Builder*, 14th February, 1885). London, 1885.
 Also general references in the following works, cited on pp. 18, 19: Baedeker (*Egypt*), *Comité*, Coste, Franz Pāshā (both books), Gayet, Migeon, Prisse d'Avennes, Saladin et Migeon.

THE NATURE OF SARACENIC ORNAMENT

THE concluding chapter of this book is devoted to the spirit and general characteristics of Muhammadan architecture in Egypt and Palestine. It is therefore undesirable to anticipate any such comprehensive survey in the present chapter on the nature of the ornament of the style, though many writers have been tempted to do so by the great importance assigned to purely decorative features by Muslim architects and craftsmen. Ornament was applied to structural features in the Mediaeval East as well as in Gothic Europe. Arches and capitals were adorned with carving, window openings were subdivided by a form of plate-tracery, piers were decorated with engaged shafts, doorways with richly-sculptured recesses, and the heavy beams of flat ceilings with gilding and colour. But the Arab builders do not appear to have gloried in construction for its own sake, to have attained that enthusiasm for the magnificent functional harmony of buttress and pier and vault that produced the great cathedrals of France and England. Rather were they inclined to concentrate on the elaboration of mere surface ornament, for reasons to be explained shortly. Yet criticism of the style, whether the critic be hostile or friendly, must not on that account concentrate on surface ornament at the expense of definitely architectural features. On their handling of problems of construction and architectural design the ability of the Saracen builders must be finally appraised, and their mastery of surface decoration is a minor if an attractive theme.

It is a subject that has been dealt with very imaginatively by various French writers, and some of them have generalized very freely as to its characteristics. Thus M. Bourgoïn,¹ perhaps with his mind harking back to games of his childhood, takes three great families of art—the Greek, the Japanese, and the Arab—and compares them to the animal, vegetable, and mineral kingdoms respectively. In the first he finds an insistence on proportion and on plastic form, the characteristics of the human figure and of the animal body; in Japanese art he sees the vegetable attributes highly developed, the principle of growth, the beauty of leaves and branches; while the polygonal shapes that he has himself popularized, in his books on Arab art, suggest to him an analogy between the geometrical designs of the Saracens and the crystalline form of certain minerals.

¹ J. Bourgoïn, *Les éléments de l'art arabe*. Paris, 1879.

No less daring is a recent English writer, the late Mr. March-Phillipps, who has written a book¹ to prove that Eastern art is chiefly concerned with colour and Western art with form. In each case he makes it perfectly clear that, in his view of art, architecture is included. The art of the East, he tells us, is essentially feminine, emotional, and a matter of colour rather than form; while that of Western Europe is masculine, intellectual, and based on plastic form with a disregard of colour. Such a generalization is too sweeping to be accepted without qualification, but the ability of its author, and the charm with which he has expounded his theory, entails on us an obligation to consider it carefully without any previous bias. To most writers on Saracenic ornament its chief characteristic has always been a remarkable insistence on pure abstract form as opposed to the representation of natural objects, and if these abstract compositions are to be excluded from his definition of 'form', limiting the latter word to plastic form and natural objects, then our English vocabulary requires overhauling.

Previous writers on this subject have treated it on various methods. Professor Lane-Poole² and M. Migeon have dealt with ornamental forms and craftsmanship according to the materials in which they are found, thus 'stalactites' are discussed in a chapter on masonry, arabesques under the heading of 'stucco-work', and so on. M. Prisse d'Avennes says that the principal ornamental forms in Arab art may be classified as geometrical, floral, and calligraphic. M. Bourgoïn³ adopts a different classification: stalactites, geometrical arabesques, and other forms. Yet a fourth method would be to divide all ornamental forms into three groups: architectural and sculptural decoration in high relief, carved and incised ornament in low relief, and decoration in colour.

But the present chapter will be arranged on an altogether different system, and I shall deal only with the various ornamental forms used by the Saracens—their origin, character, and disposition—leaving to the four succeeding chapters all account of the actual rendering of these forms in the various materials employed in architectural craftsmanship. My method thus most resembles, among those mentioned above, that of M. Prisse d'Avennes.

The decisive factor that controlled the whole development of Muhammadan ornament at the outset was the Prophet's prohibition of the use of human and natural forms in religious art. The authority for this veto is usually attributed to the Qur'ān, *Sūrah* xiv. 38:

'Abraham said, "O Lord make this land secure, and turn aside me and my children from serving idols"' [*aṣṇām*].

¹ March-Phillipps, L., *Form and Colour*, London, 1886.
London, 1915.

² Lane-Poole, Prof. S., *Saracenic Art*, 1873.

³ Bourgoïn, Jules, *Les arts arabes*, Paris,

and also in *Sūrah* v. 92 :

‘ Verily wine, and games of chance, and *statues* [*anṣāb*], and divining arrows, are an abomination of Satan’s device.’

This prohibition was more strictly defined in later writings¹ and came to be regarded as a curse on him who drew men or animals. It was unlawful for a Muhammadan to have an image of any kind in his house. It is related of Muḥammad himself that he was avowedly hostile to any representation of figures, and that once he remained standing outside the dwelling of ‘Ā’ishah until a curtain embroidered with figures was removed. There was a double reason for this hostile attitude. Muḥammad was a reformer, a Puritan, and an iconoclast. The worship of idols in Arabia was one of the first objects of his concern. The decadent state of the Christian church in his day, instead of drawing him within its fold as might otherwise have been the case, repelled him, and drove him to forbid the use of church-bells, of the symbol of the Cross, of the images of men and animals, because of their associations with Christianity. Thus was denied to Islam all those representations of saints, angels, and martyrs that played so prominent a part in the didactic art of the Byzantine church of his day, where they made an irresistible appeal to the great majority of worshippers who were unable to read.

M. Bonamy Dobrée has recently² cast doubts on the authenticity of this famous prohibition, which he regards as in itself questionable and certainly not Qur’ānic. He considers that the avoidance of all representation of living things was due to an inherent quality in the Arab temperament rather than to any decree. At all events it was very faithfully observed, and the cases in which it was transgressed, though much has been made of them in certain quarters, are neither numerous enough nor important enough to justify us in regarding them as anything more than rare exceptions to a general rule. Gayet³ cites some early examples, in buildings now no longer extant, from the writings of Arab historians. At Baghdād there was a portrait-gallery of royal personages. In the royal gardens outside Cairo the son of Ibn Ṭūlūn had his own effigy and those of his wives. The statues were of natural size, sparkling with precious stones and with diadems on their foreheads. Two hundred and fifty years later, in the inventory of a celebrated collection, we find mention of pieces of silk on which appeared a list of the various Arab dynasties with portraits of the caliphs and other important persons. And the tent of a celebrated *wazīr* is said to have

¹ *Mishkāṭ*, book xx, chap. 5, and book xii, the *Burlington Magazine*, 1920.
chap. 1.

² Dobrée, B., ‘Arabic Art in Egypt,’ in pp. 184-5.

³ Gayet, A., *L’Art arabe* (Paris, 1893),

been brightened with representations of men and animals. In these decorations were included paintings of elephants, lions, horses, peacocks, and birds of every kind ; ' a golden peacock enriched with precious stones ; a golden cock with rubies for eyes ; a gazelle of which the body was covered with pearls ; and numerous other animals, painted, carved, or woven " so perfect that at a distance one might believe them real " . ' The last opinion is due to Maqrīzī, and one cannot believe that he meant it to be taken seriously, for, whatever may be said of these ventures into natural history, they can never be charged with realism. In fact the representation of animals was always limited by strict convention.

But before describing the various animal-forms, natural or symbolical, imitated by the Arabs, mention must be made of the remarkable castle of Qusayr 'Amra, near the Dead Sea, discovered in 1898 and explored in 1900-1. It is generally agreed that the date of this building is between A.D. 711 and 750, while M. van Berchem attributes it definitely to the period 712-15. It has an architectural interest in possessing barrel-vaults, groined vaults, and a large dome on pendentives ; but is chiefly noteworthy for the wonderful series of figure-paintings that it contains. Many of these represent hunting-scenes, gymnastic exercises, and trades. There are symbolic figures, figures of women draped and nude, and an important picture of a group of conquered kings, one of whom may represent the Emperor of China. These paintings are the work of skilled craftsmen. They display a kinship with Sasanian and Persian models, as well as a certain amount of direct copyism of natural forms, and prove that at this early date the veto of the Prophet was not held to apply to the decoration of domestic architecture.

Animal forms (excluding the human form, of which practically no examples exist beyond the rare cases just mentioned) in Saracenic art, though so comparatively scarce, were used in a variety of ways. Sometimes, for instance, a lion was represented in a hunting-scene as an animal pure and simple ; at other times one finds a pair of lions symmetrically placed and facing one another, this being an heraldic arrangement ; and a third case is where the lion is used as the heraldic emblem of a mameluke sultan. Thus the lions of Sultan Baybars are found, carved over the doorway of his ruined mosque at Cairo, and again on the bridge at Ludd in Palestine. But besides animals known to the student of natural history, there are other curious composite creatures such as have flourished in these countries since the sphinx was sculptured in Egypt and the winged bull in Assyria. Of this class a famous example exists in the bronze griffin now in the Campo Santo at Pisa in Italy, brought from Egypt by the Crusader king Amalric.¹

¹ Illustrated in Migeon, *L'Art musulman*, fig. 183, and Gayet, *op. cit.*, figs. 86-7.

It has the body of a lion and the head of an eagle, and strange stiff wings so placed that they could never be used for flight. On its breast, neck, and back it wears chain-armour such as protected the bodies of the Saracen chargers in battle. Small figures of lions and eagles adorn four miniature shields that cover the upper part of each of the legs. Round the lower edge of the armour runs an ornamental fringe or border formed of Arabic lettering in Kufic characters. From these it is inferred that the work is of the Fāṭimid period in Cairo, and is most probably due to Ḥākim, who may have regarded it as an idol of the new form of religion that he endeavoured to establish.

Other examples of the same period, cited by Migeon,¹ are of smaller size, but of the same character and modelled in bronze. They include a stag with antlers, now in the museum at Munich; a horse in the Museum at Cordova, covered with dainty arabesques and suggesting Egyptian or Sicilian work of the eleventh century; a peacock in the Louvre, probably Sicilian; a lion in the Museum at Cassel, also probably Sicilian and of the twelfth or thirteenth century; and a parakeet at the Louvre, attributed to an Egyptian craftsman and to a date not later than the twelfth century. There is also a bronze lion, forming a ewer, in the Salting Collection (no. 708-1910) at South Kensington. This last-named example (resembling another formerly in the Piot Collection and found at Palencia in Spain) is of the same character as those already described, with incised patterns all over the surface, but is attributed to Hispano-Moresque work of the eleventh century.

Many other animals—lions, tigers, stags, antelopes, gazelles, hares, and various birds—are used decoratively in arabesque panels, frequently in conjunction with conventional foliage, with which their limbs are freely intertwined. Their stiff forms were introduced on woven fabrics, on ceramic work, and in every other material, and have come down to us on Italian textile fabrics. But besides all these we find many other forms that have descended from an older mythology. Carved wooden panels in the Māristān of Qalāwūn in Cairo display a winged centaur as well as the gazelles he is pursuing; the ancient form of the sphinx is revived; there is often a representation of a fight between two animals, typifying the struggle between good and evil; we find the *hom* or sacred tree of immortality, the human-headed bird, the altar of fire, the two-headed beast, the two-headed eagle, and many more. Some of these were of great age, some came from Egypt and others from Assyria through the Sasanian tradition. There are some elements that can be traced to China and others to India, while the influence of ancient Greece and Rome was felt, in spite of anti-Christian prejudice, through Coptic and Syrian channels.

¹ Migeon, *op. cit.*, pp. 222-7, and figs. 184-9.

The names of many of the mameluke sultans of Egypt were the names of animals, and Professor Lane-Poole, who gives a list,¹ considers that 'corresponding images were blazoned on their owners' shields'. Thus we have, among others, Prince Panther, Golden Bull, Lucky Bull, Wolf, Boar, Eagle, Falcon, Hawk, and Duck.

In this connexion it may be remarked that it is a question whether the origin of our European mediaeval heraldry is not to be found in the various blazons adopted by the sovereigns and nobles of Egypt. Both Gayet and Lane-Poole incline to this belief, the former pointing out that so early as the ninth century Ibn Ṭūlūn adopted the lion as his 'heraldic beast', an emblem later assumed by Baybars and still to be seen on his bridge at Ludd in Palestine and over the doorway of his ruined mosque in Cairo (Fig. 57). The court 'taster' had for armorial badge a small table, the cupbearer a cup. The beginning of English heraldry dates from the early part of the twelfth century, and though it is uncertain whether the Crusaders borrowed the idea from the Saracens with whom they were fighting, or vice versa, there is a strong probability that the former was the case. Nor has any other likely source of origin yet been established by other writers who do not admit this.

Apart from the animal subjects selected for representation, it remains to consider the form given to them by the mediaeval craftsmen of Cairo and elsewhere. Making due allowance for date and local conditions, it may be said that they are stiff, conventional, and archaic in character as a rule. So they appeared to Gayet, who uses this quality as an additional argument for the Coptic origin that he attributes to every feature of Arab art. Coptic artists, working in the remote cells whither anchorites and monks had retired from the world and the flesh, did not actually discard the representation of human and animal forms, but they treated them conventionally, on hieratic and didactic lines. They preferred symbolical and abstract types. The Arab artist, in this as in many other directions, readily reverted to the fashion of drawing found in the tombs and temples of Ancient Egypt, and thus—concludes Gayet—'his instinct took him back to the days of the Pharaohs'. But it is possible to labour this inference, which rests on the slenderest basis. Gayet always inclines to belittle the undoubted importance of Mesopotamian influence on the mediaeval art of Syria and Egypt. And another French critic² draws a sharp distinction between Egyptian and Arab feeling on this very matter:

'Arabic art flees from the significance of life with as direct a purpose as ancient Egyptian art attempts to realize it.' . . . 'There is too much meaning in organic form, too dread a significance,

¹ Lane-Poole, *op. cit.*, pp. 14-15.

² Dobrée, B., *op. cit.*

which, attractive as it might be to the ancient Egyptians or is to us, is wholly foreign to the Arab spirit.' . . . 'There is about the ancient Egyptian art a massiveness, a very significant style, a rigorous simplification to essentials. It does not fear to seek expression in the grotesque and even in the horrible, and aims sometimes at inducing fear, as in the famous statue of Sekmet at Karnak. It uses animals with a natural freedom, and the palm and the lotus are its common symbols. It is heavy and portentous, there is an intended significance in all that it does; and about every statue from the Gizeh sphinx to the bronzes and bas-reliefs of the Ptolemies there is the suggestion of an omen.' . . . 'All this is very far removed from the suave yet light-hearted daintiness of Arabic art.' . . . 'An Arabic gargoyle is inconceivable.'

So writes M. Dobrée, yet the horrible grotesque figure illustrated on p. 191 in M. Gayet's book seems to contradict him, and the giant locusts used as corbels in the mosque of Ibn Ṭūlūn at Cairo might be regarded as grotesques from their size alone. M. Strzygowski has stated¹ that in the mosque of Ibn Ṭūlūn there is no trace 'of a living animal figured as an ornament', so possibly he regards these uncouth creatures as something altogether unearthly. Finally, it may be said that animal forms were less freely used by the Saracens in Syria and Egypt than by the Moors in Spain or the Muslim Persians.

One naturally passes next to the use of plant forms in Arab art. Here again there was a tendency to a very conventional treatment from the beginning. The usual explanation of this is the recognized hostility of Muḥammad to a realistic imitation of nature, but it may be said that this hostility abated with the descent from the human to the animal form, and again from the animal to the vegetable kingdom. Here again M. Dobrée comes forward with a highly original theory to explain the conventional stiffness of Saracenic foliage:

'There is one respect in which Arabic art fails miserably, and that is in representing growth, that springing up and creation of life that is so strongly marked in nearly all other arts, and because of which the Arabic is reduced to a secondary place in the aesthetic world. And it is curious in this respect to contrast it with Renaissance art, with which it has much in common, in that both declare the grace of living. Renaissance art, however, is expressive of spring-time in a way that Arabic art could never possibly be, because there is no real winter in the country where

¹ Strzygowski, J., article on 'Muhammadan Art', in Hastings's *Dictionary of Religion and Ethics*, vol. i.

it chiefly flourishes. There is absent that fundamental association between seasons and crops consequent upon the fact that it is the Nile and not the Spring that is the begetter of all fruitfulness. There is not therefore an intense, irrepressible pagan joy in flowers and burgeoning, and the ludicrous treatment, or non-existence one is almost justified in saying, of capital-crowned pillars which are so inevitably symbolic of free proud growth, is symptomatic of this failure. Behind the art of the Renaissance there is a driving force, a vigour, that is totally lacking in the Arabic, not an intellectual force, nor a religious force, those certainly are there, but an impulse that is purely physiological.'

The earliest examples of Muslim floral ornament, such as some of the mosaics in the Dome of the Rock at Jerusalem, were executed by Syrian, Byzantine, or Coptic craftsmen, and follow fairly closely the existing local type. Moreover, much of the Sasanian decoration that might appear to have exercised a very different influence on primitive Arab work, itself owed inspiration to the same source. But in the mosque of Ibn Ṭūlūn, the real starting-point of the independent Arab style, the pattern principally used in the profuse floral borders and friezes has been traced almost without variation to ancient wall-paintings at Thebes and to Assyrian ornament at Khorsābād. As in the case of so many other features of this famous building, it may still be proved that the origin of its ornament is to be found at Sāmarrā.¹ This characteristic decoration is generally known as the 'knop and flower' pattern, and varies a good deal in execution according to the skill and the imagination of the modeller. But it is invariably highly conventional, and, though no doubt a direct descendant of the Greek acanthus and palmette forms, it represents a swing of the pendulum from the naturalism of Hellenistic foliage to the stiffer and more archaic treatment favoured by the Muslims. At the same time we find a tendency even in these early days to cover the whole of a given surface with leaves and flowers, thus showing practically no background, and avoiding the studied effect of growth from root to stalk, stalk to branches, and branches to leaves, that—as M. Dobrée has suggested—differentiates Renaissance design from the work of the Saracens. But in later examples it would be incorrect to say that the effect of growth is absent. On the contrary, it is this, rather than any portrayal of actual plant-forms, that gives to Arab conventional foliage the vigour that it undoubtedly possesses. A few well-known instances may be mentioned from the mameluke period in Cairo. The delicate stucco borders used so freely round the arches and windows of the mausoleum of Qalāwūn have, as

¹ See K. A. C. Creswell, 'Some Newly-discovered Ṭūlūnid Ornament,' in the *Burlington Magazine*, November 1919, p. 187.

their principal floral elements, buds and leaves, forming a running scroll-pattern of which continuity is the chief characteristic. The border round the great porch of the mosque of Sultan Ḥasan is a simpler development of the bud and leaf *motif*, possibly based on the earlier examples in the mosque of Ibn Ṭūlūn. The famous stucco frieze surrounding the principal *liwān* of Sultan Ḥasan's mosque is ornamented with Kufic inscriptions, with rosettes at intervals, and through the inscriptions runs a very bold scroll-pattern formed of leaves, small flowers, and buds. In this case the effect of plant-growth is as palpable as the imitation of nature is absent. In all this vigorous vegetable composition there is not a flower or a leaf that can be matched in the world of living things. The stiff foliated cresting above this frieze is even more highly conventionalized, and seems to echo the spirit of Sasanian design. Equally conventional foliage is found combined with other elements on rectangular panels throughout the fifteenth century, especially in the richly decorated buildings of Qāyt-Bāy, but sometimes it is used with great success in circular and other curved plaques in a more flowing style.¹ And there is also a type of interlacing foliage-ornament, very delicately rendered, found in several cases² and closely resembling Celtic and Scandinavian patterns, derived perhaps from Coptic and Byzantine sources. Lastly, on the beautiful tiles used freely in Syria and Egypt after the Turkish conquest, flowers and plants are represented in rich colours.

Enough has now been said of the avoidance of naturalistic elements in Saracenic ornament to explain the corresponding popularity of abstract forms, and to introduce that amazing science of geometrical arabesques which afforded the necessary reaction from the imitation of nature. The word 'arabesque' is as ill-defined in its meaning as geometrical arabesques are misunderstood and misinterpreted by hasty critics. Originally it signified something that 'pertained to the Arabs', more specifically a surface ornament formed by the combination of conventional plant-forms with artificial objects and geometrical lines, arranged to form an ordered composition. The word is used, with slight modifications, in all the principal languages of Europe, and describes the ornamental panels of this character used in the late Roman period and revived in Renaissance days, as well as the actual ornamental panels of the Arabs. It has also been used, and must be used—*faute de mieux*—in this book, with the prefix 'geometrical', to describe the extraordinary interlacing patterns—(*entrelacs* in French)

¹ Such circular panels from the mosques of Qāyt-Bāy and Ṣargitmish are illustrated in Lane-Poole's *Saracenic Art*.

² As in the prayer-niche doors from the

mosque of Sayyidah Ruqayyah in the Arab Museum; and in Sultān Lājīn's stucco *mihrāb* at Ibn Ṭūlūn.

—of polygons, circles, radiating and intersecting lines, that came to be so extensively used in Saracenic architecture of the mameluke periods that they are sometimes regarded as its most characteristic feature. They inspired a French architect of last century to publish a whole volume setting forth the methods by which they may be drawn, and to this study we shall return later. But before proceeding to a brief examination of the technique of geometrical arabesques, something must be said of the spirit that inspired them and of the sources of their origin.

There is no aspect of Arab art upon which critics have shown a greater readiness to disagree than this. The geometrical arabesque appears to one writer to be the embodiment of mystical calm, to another a meaningless jumble of restless lines. Nor is it easy for the Western mind to grasp the inner meaning of so essentially Oriental a device. But whatever conclusion is to be reached finally, it is safe to lay down as a fact at the outset that the use of abstract geometrical forms was the direct outcome of the prohibition of animal forms. It will further be generally admitted that geometry was always one of the sciences most in favour among the nations from which Islam was born. The next step in the argument is that the early Muslims, forbidden to use natural objects in the decoration of their religious buildings, because these tended to divert their thoughts to fleshly and worldly topics during worship, adopted abstract geometrical forms which, in ratio to the extent of their elaboration, induced that spirit of absorbed contemplation that is so foreign to the European temperament. But this inference appears to be disputed by at least one English writer who finds in geometrical arabesques only a disturbing element. Mr. March-Phillipps's book, *Form and Colour*, has been quoted earlier in the present chapter; in another volume¹ he takes the view of Arab geometrical ornament that its effect on the beholder is the opposite of restful, and instances this as yet a further example of the feverish, restless, and hasty disposition of the Arab himself. Doubtless there are other critics who agree with him, but in the main his opinion is not shared by any of the leading authorities on the style. Bourgoïn speaks of this decoration as aesthetic geometry, but considers that the original craftsmen designed these intricate patterns by instinct rather than by rule or theory. Gayet says much of its mystical effect and talks of the ecstasy produced by contemplating it. Prisse d'Avennes is more concerned with technique than with impressions, but reminds his readers that it has been aptly compared with Guipure lace. In a recent book by Margoliouth² is the suggestive remark that '... to the practised eye the result displays

¹ L. March-Phillipps, *The Works of Man* (London, 1911), p. 164

² D. S. Margoliouth, *Mohammedanism* (London, 1911), p. 228.

endless variety, to the untrained it is monotonous'. Viollet-Le-Duc in his preface to Bourgoïn's larger work observes that one's first attempt at drawing any of these polygonal patterns is followed by *vertigo*. Saladin offers two original theories of the origin of geometrical arabesques which will be cited shortly; if either were true, it would follow that the whole mystical interpretation of them would collapse like a house of cards, for he implies that only an accidental discovery led to their adoption. So, too, Strzygowski, by regarding the source of these geometrical elements as existing in the primitive art of nomadic peoples, sees in the elaborate arabesques of the mamelukes a retrogression rather than some mysterious spiritual advance. Finally, we may again learn something from the acute judgement of M. Dobrée, who seems to have solved the problem of the arabesque in accordance with the views of several previous writers, yet without losing sight of either the technical or the spiritual aspects of the matter. His technical explanation is the one now generally accepted, that this surface-decoration aimed primarily at producing texture, and at reducing the area of large flat surfaces exposed to strong light.

'In countries of hot sun and desert, one of the objects of decoration must surely be to afford a relief to the eye from surfaces that dazzle in the noon-day glare. And if we accept this, it provides us with a clue to the fluting of domes . . . and to the geometric arabesque that in the more grandiose period replaced the fluting.'

This theory will be referred to again very shortly, meanwhile the same writer's explanation of the spiritual effect of geometrical decoration is quoted :

'The chief differentiating quality of the Arabic as compared with other systems of art, decorative or otherwise, lies in the fact that the arabesque strives, not to concentrate the attention upon any definite object, to liven and quicken the apperceptive faculties, but to diffuse them. It is centrifugal, and leads to a kind of abstraction, a kind of self-hypnotism even, so that the devotee kneeling towards Mecca can bemuse himself in the maze of regular patterning that confronts him, and free his mind from all connexion with bodily and earthly things.'

He continues that this mental condition is analogous to that of a sleepless person counting sheep till at last he dozes away into unconsciousness. This Arab love of geometrical form, destined to become the dominant characteristic of Muslim art, was, M. Dobrée thinks, instinctive rather than a result of prohibition, hence the perfection of detail that it produced. Even in semi-floral patterns . . .

‘ there is in the finished workmanship a fleeing from a too obvious suggestion of concrete organisms, a fleeing, one might almost say, from anything inducing thought. Yet in spite of its apparent distaste for living tissue, for hot blood and passions and the brutal realities of life, physical and spiritual, which have been the essential stuff of other arts, this art is rarely insipid. It sets itself up in deliberate contrast to the other life of the world merely because it is a refinement upon it, a selection from it—and the craftsmen who laboured at it, or the luxurious monarchs and nobles who commanded it to be carried out, were in no sense hermits or recluses.’

There is no more unanimity among scholars as to the origin of this geometrical ornament than they display in interpreting its nature and its purpose. The fact is that many sources may reasonably be held to have contributed to its origin and development. Long before the foundation of Islam geometrical patterns were used not only in borders but in surface decoration in the successive civilizations of Egypt, Mesopotamia, Persia, and India. They were popular in the buildings of the Sasanian kings. Farther west they appear in very early Christian architecture in the cities of the Adriatic, in Byzantine work, and in the provincial art of the Christian Copts and Syrians. Generally speaking, the Mesopotamian examples are more exclusively geometrical than those derived from Christian sources, where there is a tendency to more flowing patterns in which plant-forms are freely used. Moreover, the Christian examples contain symbolical forms—the ‘Chi Rho’, the Cross, and other features—often used in panels alternating with geometrical plaques. The Sasanian period furnishes many instances of cusped circles and of patterns based thereon. In Syria natural forms were introduced very sparingly into these arabesques and some of the *claires-voies* or pierced panels illustrated by De Vogüé¹ are the obvious prototypes of similar work by the Arabs. Some of these examples, both in Syria and Ionia, are of pre-Christian date. But perhaps the most suggestive of all known precedents is to be found in the decorative use of star-patterns by the Copts of Egypt, who showed a marked predilection for designs in which stars were distributed regularly over a background. Gayet says that the star had its origin in ancient hieroglyphics, where it was the symbol of adoration, hence its use by the later Christians of Egypt in the decoration of their churches. And though Gayet’s admitted desire to ascribe everything in Arab art to a Coptic origin must be borne in mind, he appears in this case to have offered a very reasonable explanation. One could continue multiplying examples to show that

¹ De Vogüé, *La Syrie centrale* (Paris, 1877), vol. i.

there was a usage of geometrical patterns in many of the countries of the Near East prior to the foundation of Islam, and, indeed, that this usage extended to Celtic Britain and to Scandinavia, where beautiful conventional surface-designs, composed chiefly of plant-forms arranged geometrically, were being developed abreast of the work of Ibn Ṭūlūn and the Fāṭimids of Egypt. It is sufficient to state that the craftsmen of Egypt, above all other Muslim artists, brought this new system of decoration to a high pitch of perfection ; that they were probably influenced by Coptic work in Egypt, if, indeed, they were not Copts themselves ; that they adopted geometrical forms because of Muḥammad's prohibition of natural forms, because they disliked the glare of large flat surfaces, and because this form of decoration assisted in producing a state of mental abstraction conducive to worship. It might also be added that the first definitely Saracenic type of this interlacing ornament appears in the mosque of Ḥākim in Cairo and thus dates from A. D. 990-1012.

But it might also be added that Saladin and Strzygowski offer alternative theories of the origin of geometrical arabesques. The latter regards them as essentially characteristic of nomad peoples, and thus derived from the primitive patterns worked on tents and rugs by the tribes of Central Asia. M. Saladin thinks that the embroidering of stars on to a woven fabric in regular rows may have led to the joining by lines of the points of these stars to produce the familiar intersecting polygon-pattern, that this *motif* would be next transferred to carpets, then by a natural transition to ornamental paving, and finally to wall-surfaces. Yet he also suggests that it may have been evolved in a very different way, that it may have been originated by Byzantine mosaic-workers. The most skilful of these were engaged in the representation of figure subjects, the less talented on geometrical patterns which required little ingenuity. When the Arabs became their masters, and the use of human and animal forms was vetoed, a large number of workmen were found able to execute geometrical designs, and these designs the Arabs readily adopted as the dominant feature in their new art.

We know very little as to how these elaborate patterns were evolved in the artist's brain, or how they were drawn on the walls. M. Saladin does not consider that copy-books or pattern-books were the usual source of inspiration. Books of any kind were rare, and what there were consisted chiefly of treatises on theology, history, and law, never on technical subjects, though no doubt simple geometrical figures were illustrated in handbooks of geometry. Yet there was certainly a very definite tradition in these designs, so that patterns must have been handed down from a master to his apprentice, and

jealously guarded as one of the trade-secrets controlled by the guilds, and only revealed in instalments to the apprentice or journeyman as he learned his trade. Then the design, learned by heart, would be drawn on wood whitened over, as in Muhammadan schools to-day, or scratched on a prepared surface with a pointed instrument. The numerous repetitions were probably obtained by the use of a template or stencil, as appears from the notable regularity of their execution. Indeed, the extreme delicacy and care displayed in the craftsmanship of these designs is very important.

The methods of composing and dissecting these complex polygons have formed the subject of an exhaustive study by M. Bourgoin.¹ A careful examination of his two hundred diagrams should convince any reader (if, indeed, he has not been convinced already by the actual designs themselves on mosque walls in Cairo) that, whatever part instinct may have played in these compositions, a considerable knowledge of practical geometry must have accompanied it and controlled it. For in every case the design, however complicated and tangled it may appear at first glance, is built up on a system of articulation and 'orbiculation', and is ultimately capable of reduction to one of the nine simple polygonal elements. The pattern may be built up of rectilinear lines, of rectilinear and curvilinear lines in combination, or wholly of curvilinear lines, in which case a cusped or foliated effect is often produced. But whether a simple interlacing all-over pattern be adopted, or another in which stars or other polygonal forms are used at regular intervals, the method of composition or dissection is the same, and a careful study of M. Bourgoin's work, where two hundred designs are analysed and reduced to their elements, will explain the system in a way that is quite impossible in the present volume. A student venturing into this by-path of art finds himself in good company, for it is related of no less a celebrity than Leonardo himself that he used to spend much of his time with a compass working out complicated geometrical arabesques. But there is a more delicate aspect of the subject when one comes to consider the 'philosophy' of these polygons as interpreted by Gayet.

'The pattern derived from the multiplication of the square or the octagon'—he writes—'will awaken the idea of the unchangeable and the eternal, that based on the heptagon suggests a vague and restless mystery' . . . and so on.

From the consideration of ornament derived from natural forms and from geometrical arabesques, one passes next to another element hardly less important in Arab design—lettering, used decoratively

¹ J. Bourgoin, *Les éléments de l'art arabe* (Paris, 1879).

either by itself or in combination with natural or geometrical forms. In this usage we find a close similarity, if not, indeed, a connexion with the art of China and Japan, where letters are used decoratively. Chinese pottery has been found in one of the earliest centres of Islamic culture, the recently-excavated city of Fustāt near Cairo, and it is not impossible to see in the ornamental writing used on these pieces of earthenware one of the contributory sources of this important element in Saracenic design. Another fount of origin may be sought in the carved inscriptions of Mesopotamia and Syria, many of which are exhibited in the British Museum. To trace any influence to the ancient hieroglyphic writing of the Egyptians is a matter for question. Although hieroglyphics were freely used on wall-paintings, bas-reliefs, and other works of art, it is not generally considered that this usage was in any sense decorative. We have grown familiar with their appearance on cartouches and elsewhere, but the principles of composition do not appear to have been applied to them, whereas in Arab art calligraphy became one of the most beautiful elements in design. This appreciation of lettering for its own sake by the Muhammadans would appear to have a double derivation; from the value attached to pure calligraphy as part of an educated man's education, where drawing and painting as we understand them had no place; and from the intense veneration of the sacred books of Islam—especially, of course, the Qur'ān—leading to the use, everywhere and anywhere on the walls of the mosque, of texts as decoration. To these two sources one may add a third, the talismanic virtue ascribed to certain words, names, or sentences, as a protection against the powers of evil.

Arabic lettering as used decoratively in the Middle Ages assumed two forms, Kufic and Naskhī, both of great antiquity, and for many centuries used contemporaneously according to circumstance. The former was so called from the ancient Muslim city of Kūfah in Mesopotamia, now in ruins. Here there was, in the early days of Muhammadanism, a famous school of writers who were engaged in the transcription of the Qur'ān. Kufic script closely resembles the older Syriac characters. The alphabet contains only sixteen of the twenty-eight Arabic consonants. The letters are stiff and rectangular in form, and are thus well adapted for architectural use. Two very early examples of inscriptions in characters closely resembling Kufic have been deciphered, and bear the dates A. D. 511 and A. D. 568 respectively.¹ But perhaps the most important example in architecture of the use of these characters in their early forms occurs in the ninth-century mosque of Ibn Ṭūlūn at Cairo. Here bands of lettering occur in all parts of the building, notably in the celebrated wooden frieze which, according to a recent

¹ See article 'Arabia' (p. 382) in the *Encyclopaedia of Islām* (London, 1910).

investigator,¹ originally measured nearly a mile and a half in length. This inscription was not formed, as Corbet states, of separate wooden letters fixed to a wooden backing, but of raised letters cut on the solid. The letters are 19 cm. (about 8 in.) in height. As time advanced, the increasingly gorgeous architecture of the mamelukes demanded a less austere calligraphy, and the Kufic alphabet was modified by the addition of curved elements, enabling it to be combined more easily with plant-forms to produce an effect of scroll-work in the friezes and archivolts. The great stucco frieze round the Mecca *liwān* in the mosque of Sultan Hasan at Cairo is the chief example of this type.

But although Kufic characters were thus employed in architecture so late as the period of the Circassian mamelukes, on account of their decorative value, they had long given place to the Naskhī alphabet elsewhere. This alphabet is as old, or even older than Kufic, and closely resembles the characters of modern Arabic, but is more rounded and cursive in form. It was used architecturally abreast of Kufic, but never supplanted it until the Turkish conquest. An important example is to be found outside the mosque of Barqūq *intra muros* at Cairo.

Apart from the straightforward use of letters in long bands, they were also adapted to fill plaques of various shapes, and to form monograms or even pictures. There was a variant known as rectangular Kufic which so closely resembles a fret that only an expert recognizes at first glance that it is formed of letters. Then there are several cases where a word or text was written in Naskhī characters, so arranged as to form a representation of some natural object. Thus Prisse d'Avennes illustrates an eagle, a lion, and a knight on horseback, the 'picture' in each case being formed of Naskhī characters; while he also affords an interesting comparison in a representation of the Ka'bah mosque at Mecca, built up of rectangular Kufic letters.²

Other elements used decoratively by the Muslims in Egypt and Syria include the scallop-shell borrowed from earlier civilizations. It is frequently found in Sasanian buildings. A good Fāṭimid example occurs in the blank arches of the façade of the mosque of al-Aqmar (A. D. 1125), a later example in the arch over the entrance to the Bath of Bashtāk (A. D. 1341), both in Cairo. A favourite enrichment for an archivolt in the mameluke period is a form of convex fluting, found in several cases in Cairo and on the arches of the *mawāzīn* of the Ḥaram ash-Sharīf at Jerusalem. The chevron or zigzag moulding is another element borrowed by the Muslims from the East, and by them, according to general belief, contributed to the Romanesque architecture of Europe.

¹ The late R. Williams. See Bibliography on p. 62.

² It must be remembered that examples of Kufic lettering are found carved in several churches of Central and Southern France, notably at Le Puy.

The Greek key-pattern or fret was used by the Saracens in Cairo in the twelfth century.

There are many architectonic forms in Arab art that cannot be included in a chapter on ornament. Among them are arches, pierced parapets, and other features. But there is one form, strictly speaking architectonic, that is, nevertheless, so purely decorative in its application and so peculiar to Muslim work that it must be mentioned here—the curious feature commonly called, from its appearance in its most exaggerated form—the ‘stalactite’. Its origin has already been discussed in a previous chapter,¹ and its application to various materials naturally falls under the heading of craftsmanship,² so that all that concerns us here is its decorative character, which has called forth a good deal of criticism, both hostile and favourable, from writers on Saracenic architecture. It constitutes, with Kufic writing and geometrical arabesques, one of the three most familiar features in all branches of Muslim architecture, and it affords one more evidence of the love of the Arab craftsman for purely geometrical and abstract forms. Its appearance, especially in its later rectangular variety, inevitably suggests a series of prisms. To Gayet it suggests something far more poetical. As used by the earliest mameluke sultans it expresses eternity and majestic serenity; in the mosques of the later mamelukes he reads in it a revelation of the doubts and melancholy of decadence. For this purpose they adopted the heptagon, ‘which, of all polygons, best signifies misery’. Then they twisted the profiles of the stalactites, they ranged 400,000 prisms round one dome, stalactites became convulsed to the point of representing no more than a triumph of technical skill; and finally stalactites were adopted by the Turks without any regard to ‘their philosophy or their transcendental beauty’.³ Very different is the view of an American architectural writer: ⁴

‘This construction is far from being an intelligent one when considered from the point of view of economy or durability. It is a mere ornament, and depends for its existence upon the extraordinary tenacity of well-chosen cement and its perfect adaptation to building with brick, and coating the surface of the rough masonry. It is, indeed, a kind of cast of strong plaster based upon a brick substructure.’

But whether constructed as thus described, or carved out of blocks of masonry like the pendants in Gothic fan-vaulting, it must be regarded as purely ornamental, and being a decoration added for effect to the surface of a vaulted porch-head or a dome-pendentive, it may be

¹ See pp. 74-5.

² See pp. 108, 207.

³ A. Gayet, *L'Art arabe* (Paris, 1893),

pp. 159-60.

⁴ Russell Sturgis, *A History of Architecture* (New York, 1910), ii. 212.

compared with 'painting the lily'. This last, however, is a criticism that may be applied to many decorative forms. It is enough to say that the use of stalactites on structural grounds is indefensible, and that they were probably utilized for a double purpose—to satisfy the Arab love of geometrical forms and to break up the bare surfaces of vaults. Practically everything that can be said against stalactites applies with equal force to the elaborate tracery carved on Gothic fan-vaults, still more to the pendants already mentioned. But when stalactites came to be carved in long rows to form cornices, when they made their appearance on wooden beams and brackets, on capitals and in other unexpected places, it becomes still more obvious that they can no longer be regarded as in any way structural, and must be finally classified as ornamental features peculiar to Muslim art and attractive to Muslim rather than to Western eyes.

Speaking in general of the disposition of ornamental features in Saracenic architecture, it may be said that one cardinal principle appears to have been observed. Ornament was used chiefly to break up large flat surfaces, perhaps in the first instance because large flat surfaces reflecting the glare of the sun are trying to the eye in the climate of the East. Western architecture depended for variety on plastic forms in high relief or in silhouette, on boldly carved naturalistic forms and on strongly-marked mouldings. In the art of the Arabs, mouldings and high relief are equally absent. All effort is devoted to produce texture rather than relief, and as such texture is in many ways akin to tint, there is some justification for the theory of Mr. March-Phillipps, already cited, that colour rather than form is the predominant factor in Arab art. The elaborate decoration of walls and domes was incised rather than modelled, though it must be borne in mind that the strong light of Egypt gives nearly as much value to a line scratched on stucco as the atmosphere of England does to bold stone-carving, and this is another instance, like the delicate mouldings of the Parthenon, of art adapting itself to local conditions. But, on the other hand, in their embattled or foliated parapets, in their deeply-recessed portals, and above all in their minarets, the Arabs showed that they were perfectly aware of the value of shadow and silhouette.

Two minor aspects of their use of ornament demand notice. Geometrical arabesques and other intricate patterns were generally placed at points above eye-level, as it was recognized that the lower parts of walls should have a restful effect. Such surfaces were normally decorated with marble dados of rectangular design and in low tones, such as white, grey, and black. And perhaps the most successful use of ornament the Arabs ever made is to be seen in the plaques—circular, square, or lozenge-shaped—applied to the plain façades of stone buildings.

It was in wooden ceilings that colour was most freely used. Sometimes the great beams and brackets show the natural dark colour of the timber, but in such cases their sides and soffites are carved and accentuated with gilding. More usually colour is employed in addition to carving and gilding, the favourite tints being blue, red, and green. White, yellow, and gold were adopted for the edges of coloured leaves and other forms, and for lines in borders, &c. Such of the mosques of Cairo as are completely roofed with a dome are dark within, as the windows are for the most part shuttered, so that the brilliant colours used are not garish. But in those cases where the sanctuary is open to the *ṣahn* (as in the mosques of Māridānī and Mu'ayyad) the effect is somewhat startling. The application of colour to interiors is perhaps best studied in the mosques of Abū Bakr, of Sultan Ḥasan, and of Qalāwūn. Externally the chief use of colour is in the striped façades that appear so *bizarre* to the European taste. It is possible that this fashion may have originated in the alternate courses of brick and stone found in Byzantine buildings, but in Egypt it is generally believed to have been utilized for the purpose, already noted so often in this chapter, of relieving large flat surfaces exposed to the glare of the sun.

BIBLIOGRAPHY FOR CHAPTER X

- Bourgoin, J. *Les Arts arabes*. Paris, 1873.
 — *Les éléments de l'art arabe*. Paris, 1879.
 Crace, J. D. On the ornamental features of Arabic architecture in Egypt and Syria (in *R. I. B. A. Papers*, 1869-70). London, 1870.
 Creswell, K. A. C. Some newly-discovered Tūlūnid ornament (in the *Burlington Magazine*). London, 1919.
 Diez, E. *Die Kunst der islamischen Völker*. Berlin, 1919.
 Dobrée, B. Arabic art in Egypt (in the *Burlington Magazine*). London, 1920.
 Flury, S. *Die Ornamente der Hakim- und Ashar-Moschee*. Heidelberg, 1912.
 Gayet, A. *L'Art arabe*. Paris, 1893.
 Harvey, W. The Geometrical Decoration of Domes (in *The Builder*). London, 14 April, 1922.
 Herz Bey, M. *Catalogue of the Arab Museum at Cairo*. Cairo, 1907.
 — *La polychromie dans la peinture et l'architecture arabes en Égypte*. Cairo, 1894.
 Herzfeld, E. Article on 'Arabesques' (in the *Encyclopaedia of Islām*). London, &c., 1908.
 Hessemer, F. von. *Arabische und Alt-Italienische Bau-Verzierungen* (vol. i). Berlin, 1842.
 Lammens, H. L'attitude de l'islam primitif en face des arts figurés (in *Journal Asiatique*). Paris, 1915.
 Lane-Poole, S. *Saracenic Art*. London, 1888.
 Migeon, G. *Les Arts plastiques et industriels* (vol. ii of *L'Art musulman*). Paris, 1907.
 Much, H. *Islamik*. Hamburg, 1920.
 Owen Jones. *Grammar of Ornament*. London, 1856.
 Prisse d'Avennes. *L'Art arabe d'après les monuments du Caire*. Paris, 1878.
 — *La décoration arabe*. Paris, 1880.
 Speltz and Spiers. *The Styles of Ornament*. London, 1910.
 Spiers, R. P. Stalactite Vaulting (in *Architecture East and West*). London, 1905.
 Strzygowski, J. Muhammadan Art (article in *Dictionary of Religion and Ethics*). Edinburgh, 1908, &c.
 Also numerous references in list of general works as selected on pp. 18, 19.

XI

CRAFTSMANSHIP : STONE, MARBLE, AND STUCCO

ALTHOUGH the great majority of the surviving mediaeval monuments of Egypt and Palestine are built of stone, and although the first mosques of Syria followed the masonry-construction traditional in that province, the earlier buildings of the Arabs in Cairo, Mesopotamia, and Arabia were of brickwork. The mosque adjoining the Malwiyyah minaret at Sāmarrā was constructed of bricks, as were most of the later buildings of Mesopotamia and Persia, and the design of the great mosque of Ibn Ṭūlūn in Cairo, already very fully described in the third chapter of this book, is generally believed to have been based on the mosque at Sāmarrā. The description of the brickwork already given in that chapter may be recalled here. The bricks used are dark-red in colour and were probably burnt near the site. They measure about $7\frac{1}{2}$ by $2\frac{1}{2}$ by $1\frac{3}{4}$ in., according to Wild, though Corbet gives the width as $3\frac{1}{2}$ in. The mortar is made from lime, obtained probably from the neighbouring quarries at Turrah and Massarah, and the joints are very thick. The bond used corresponds to our 'English' bond, but the same method had been used centuries before by the ancient Egyptians. That the builders were skilled in brickwork is evident from the way in which they have formed engaged shafts at the angles of the piers of the arcades. But from the outset it was probably intended to cover the whole of the brick surfaces with a coating of gypsum or stucco, applied in several layers. This produced a fine and hard surface, large parts of which were left plain, the remainder being modelled or coloured.

The foundations of this mosque were in all cases carried down to the solid rock beneath, the surface of which at one point nearly reached the floor-level and at another was some 18 ft. lower. It may be that especial care was taken with the foundations of Ibn Ṭūlūn, and that it is to this precaution that we owe its preservation. But the later Saracen builders also knew something of this very important branch of construction, as appears in the passage that Prisse d'Avennes quotes¹ so enthusiastically from 'Abd al-Latīf. It appears that in the latter's time it was usual to sink piers of masonry some 4 'cubits' apart, allowing them to subside by their own weight while divers removed water and sand from below. Meanwhile masons continued to

¹ Prisse d'Avennes, *L'Art arabe* (*op. cit.*), text volume, p. 169.

add courses to the pier from above, until finally it sank to a firm foundation. The geological formation of the Nile valley, with its waterlogged layers of mud and sand, and with limestone not far below the surface, made some such method particularly necessary in Cairo. On these rows of 'piles' were built the main walls of masonry, and Prisse d'Avennes observes that the result was much the same as is obtained nowadays by using pile foundations connected by arches. He also adds that the Arabs used to sprinkle the blood of a lamb or buffalo on the stones of the foundations, giving the flesh to the poor.

Ibn Ṭūlūn's aqueduct at Basatin, and the mosque of Ḥākim in Cairo that was built more than a century later, were entirely constructed of brick. But the Fātimid gates of Cairo and the mosque of al-Juyūshī on the Muqāṭṭam Hills, both erected at the end of the eleventh century, are all of stone. A connecting link seems to be supplied by some remarkable masonry arches of the Ḥosh Abū 'Alī near Cairo, admirably illustrated by Creswell,¹ where the construction of the voussoirs is obviously inspired by brickwork. After the introduction of masonry for columns, capitals, foliated parapets, pierced panels, &c., where it gradually displaced stucco on a brick core, brickwork continued in use for internal walls up to the end of the thirteenth century, as also for minarets, the group of buildings erected by Sultan Qalāwūn in 1284-5 displaying the first Egyptian minaret of masonry, according to Herz Bey.

During the Mameluke period brick was little used in mosques, but after the Turkish conquest it was extensively employed both in religious and domestic buildings. In towns of the Nile delta—Alexandria, Maḥallat al-Kubrā, Damietta, Manzalah, Maṭariyyah, and, especially, Rosetta—it was used decoratively with considerable success. This 'Delta brickwork', as it is commonly called, is of much better quality than usually found in Cairo, where bricks of a coarse texture and dirty colour are used under a layer of stucco. As seen in such examples as the mosques of 'Alī al-Maḥallī (1721), Muḥammad al-'Abbāsī (1809), and Shaykh Toka at Rosetta, in the mosque of al-Baḥr at Damietta and the Terbana mosque at Alexandria (1684), the ornamental brickwork of the porches is most attractive. Two colours of bricks are used, one dark-red, the other bluish-black. A trefoil-arch is generally used over the porch, with brick voussoirs (headers and stretchers alternately). A course of stretchers surrounds the brick voussoirs. Generally a rectangular frame of brick surrounds the whole. The system of bonding employed varies a good deal, and we find, in different examples, instances of what we should call 'English', 'Flemish', and 'stretcher' bond. Geometrical patterns of coloured bricks are introduced into the spandrils of arches and other flat surfaces, the effect of all this ornamental

¹ Creswell, *A brief Chronology*, &c. (*op. cit.*), Plate III b.

work being enhanced by white pointing in lime mortar, now in many cases perished and not renewed. In several examples, geometrical patterns were also formed of terra-cotta in the form of hexagons, triangles, &c., also pointed in white. An unusually early instance of this treatment appears in the mosque of the Princess Aṣal Bāy at Madīnat al-Fayyūm (1498-9). Another attractive detail of the 'Delta style' is the restrained and tasteful use of small plaques of glazed tiling in conjunction with brickwork, the rich blue and green of this faience harmonizing perfectly with the dull red of the surrounding brickwork.

The use of brickwork externally in the Turkish period was not, however, confined to the Delta towns, though there it was developed to a degree not found in the Nile valley nor even in Cairo itself. In the capital it was largely used in the overhanging upper portions of the houses, usually supported on bold stone corbels with a projection of 2 ft. or more. According to Edward Lane, the dull colour usually seen in the brickwork of these houses (giving them a shabby and unpleasant appearance) is really due to the mortar composed of one part of ashes with one of lime and two of Nile mud. Another authority¹ states that ashes are obtained from the baths and bakehouses, and that those from the former, when burnt with street-refuse, give the mortar that hardens most quickly, but that in time it is reduced to dust.

The introduction and rapid development of masonry during the Fāṭimid and Ayyūbid periods were due to two causes already mentioned in earlier chapters: the work of Armenian architects on the fortifications of Cairo in the latter half of the eleventh century, and the close intercourse of the Saracens with the Crusaders in the twelfth and thirteenth centuries. Cairo was fortunate in possessing an excellent supply of durable limestone in the neighbouring cliffs of the Muqāṭṭam Hills, used extensively now, as then, for all building purposes. But unfortunately the mediaeval builders resorted much too freely to another quarry, the great buildings of an earlier civilization—pyramids, tombs, and temples—that lay so conveniently to hand. In the times of Saladin and his successors, sweeping inroads were made upon many an ancient monument that would otherwise have come down to us intact, for the climate of Egypt is far more kind to these relics of the past than the ambitious sultans and amīrs ever were. There are mosques in Cairo where the pious Muslim doffs his sandals on passing a granite threshold carved with hieroglyphs of the Pharaohs, and the citadel itself was largely founded on stones torn from one of the Pyramids of Gizah. The Christian churches too were rifled of their marble columns and carved capitals, but of that more will be said later in this chapter. The stones chiefly used in the mosques of Cairo during the mameluke

¹ Count R. d'Hulst, 'The Arab House of Egypt' (in *R. I. B. A. Trans.*, 1890).

period were either a white limestone of close texture which turns slightly grey with the lapse of time, or a yellowish limestone consisting of fossil shells. The latter is more porous than the former and is less suitable for carving, but was almost exclusively used after the Turkish conquest of Egypt in 1517.

The traveller Nāṣir-i-Khusrau, speaking of the palace of al-Mu'izz in Cairo, built in 970 but now no longer in existence, says that the walls were built of stones 'so well joined together that one would think them cut from a single block'. But the Fātimid wall of Cairo, built in 1087 to replace the earlier brick wall which was then in a ruinous state, forms, with its gates, our first dated example of masonry in Cairo. According to Creswell,¹ a portion of its northern length still remains, and consists of a rubble core faced with dressed stone which is still in good condition. The masonry of the three gates is of a very high order, showing a considerable acquaintance with stereotomy and of all the details of military architecture as practised by the Byzantines and Armenians. In this wall columns are used as bonding ties or 'through stones', built right across the thickness of the wall. Creswell also describes² the portions of the city wall attributed to Saladin, and notes a further technical advance in the use of large rusticated blocks with drafted margins. Similar masonry is found in the citadel of Cairo, in the portions built by Saladin. It is known that Crusader prisoners were freely employed on the latter work, and it is interesting to compare the stone-dressing here with that of their buildings in Palestine.³ Some of the stones used in the construction of the citadel walls are 6 ft. long and are built in courses 2 ft. 6 in. high. Returning to the Fātimid period we find the first stone façade in the mosque of al-Aqmar (1125), but much earlier than this is the plain little mosque of al-Juyūshī (1085) on the edge of the Muqāṭṭam hills. In the former example only the façade is of stone, the columns of the arcades being of marble, and the remainder of the structure of brick. But the masonry is so admirably executed that this cannot possibly be the first work of an inexperienced craftsman. The use of brick for interior walls was now abandoned in favour of rubble stone which was plastered. From this date stone was exclusively used for all parts of the walls, sometimes plastered internally, sometimes covered with faience or with marble dados, frequently exposed in later work, and occasionally carved in low relief.

Externally a curious practice grew up which eventually became characteristic of almost all mameluke buildings, the use of alternate

¹ Creswell, *op. cit.*, pp. 54-6.

² *Ibid.*, pp. 66-9.

³ See notes on stone-dressing in Jerusalem

by A. C. Dickie in *Pal. Explor. Fund. Quarterly Statement* for 1897.

courses of stone of different colours, producing an effect of horizontal stripes. The origin of this practice is uncertain. Saladin and other writers attribute it to Byzantium, Lane-Poole to the Roman buildings in Egypt. In the former case it is probably derived from the use of horizontal bands of brickwork at intervals in stone façades. Examples

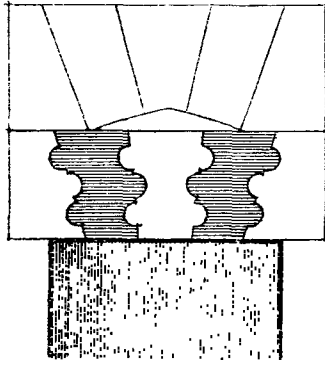


FIG. 172. CAIRO: MAUSOLEUM OF BAYBAR II. JOGGLED LINTOLS. M.S.B. del.

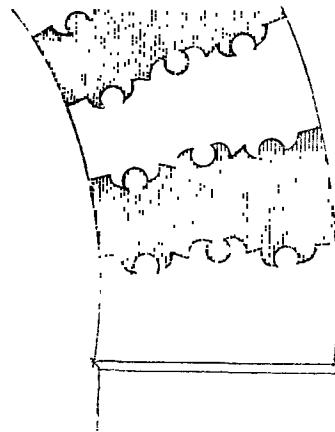


FIG. 173. CAIRO: MADRASAH OF BARQŪQ (*intra muros*). JOGGLED VOUSOIRS. M.S.B. del.

of this are common in Salonika and elsewhere, and even nowadays one finds these bands of brickwork used very effectively in the walls of modern stone houses in Egypt intended eventually to be covered with stucco. Lastly, there is another theory that these 'striped façades' are only another evidence of the Arab's desire to avoid large plain surfaces liable to be trying to the eye in the glare of the sun. In buildings of the best period the contrast was obtained by the alternate use of stones of different colour, reddish and white, or grey and white. A late (but very notable) instance of this practice is to be seen in the interior of the Khān Asad Pāshā at Damascus, where the whole of the elaborate interior, with its nine domes and far more numerous arches, is a series of stripes in grey and white (Fig. 171). For the practice soon ceased to be confined to horizontal stripes, and was extended to the voussoirs of arches and to other features. When the contrast in colour was artificially obtained, as in the decadent mosques and houses of the Turkish period, the stripes were painted on the courses, or even on a flat stucco surface, with ochre and limewash alternately. Lane-Poole has pointed out a curious fact, at times useful to an architect when surveying an old building in Cairo, that these courses are invariably of a fairly uniform height, from 13 to 14 in.

The jointing of stonework in the buildings of the mamelukes was a departure from the methods found in the styles from whom they had borrowed the rest of their craftsmanship in masonry. Instead of the metal dowels and cramps used by their predecessors, they introduced an elaborate system of joggles which came to form one of the most characteristic and singular features of Muhammadan architecture in Egypt and Syria. Occasionally these joggles assumed the rectangular or circular form found in the masonry of other countries. An early

example may be seen in the flat arch over the doorway of the Bāb al-Futūḥ (1087) at Cairo. But the architects of the Mamelukes soon abandoned these comparatively simple methods for a fanciful system of indented or fretworked joggles which they used in combination with alternately-coloured voussoirs to produce an effect of counter-change. At first these were cut in the solid stone, but, though theoretically they should have produced a perfectly rigid and immovable joint, the weakness of the sharply-pointed and curved projections soon resulted in the splintering of the stone in many cases. This has happened in some of the numerous instances where an ornamentally joggled flat arch over an opening is strengthened by an ornamentally joggled relieving-arch. Sometimes the segmental space between these two arches is filled with *faience*. The same principle was also frequently applied to stone and marble steps and thresholds (Fig. 174). As the mameluke period progressed, ornamental joggling was extended to the marble veneering of the *mīhrāb*, until, in such cases as illustrated in Fig. 96, it is impossible to know to what extent the voussoir can be regarded as a structural feature, or how far it is merely an applied ornament. The passion of the Arabs for displaying their extraordinary skill in handling materials led them again and again to indulge in this work merely as a *tour de force*, of which the effect on the beholder is often only bewildering. After the Turkish conquest this marvellous masonry came to be imitated and caricatured in paint on flat plastered surfaces.

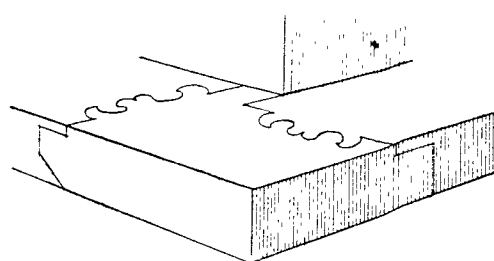


FIG. 174. CAIRO: MAUSOLEUM OF BAYBARS II. JOGGLED STEP. *M.S.B. del.*

A curious device, adopted by the builders of the brick houses in Rosetta already mentioned, was the use of antique stone columns at the angles of walls, or under a projecting storey or staircase. These columns were easily obtained from the adjoining ruins of Bolbitine.

In the design of their façades the Saracens progressed slowly. The outer walls of the first mosques do not appear to have been architecturally treated in all cases, and were left almost completely bare. The exterior walls of the four *liwānāt* or cloisters of Ibn Ṭūlūn faced on to a continuous open court, the *ziyāda*, but the long range of pointed windows was broken up by boldly scalloped niches of Mesopotamian type, and a striking open balustrade or battlement crowned the walls. Thus, although the tracery of the windows is generally believed to be several centuries later, it cannot be said that the façade was entirely neglected. The mosques of Ḥākim and al-Juyūshī are too ruinous, and that of al-Azhar has been too much altered, to enable us to form any

opinion as to the treatment of their façades. But the small mosque of al-Aqmar (1125) affords an instance, curiously similar to the Baroque churches of Italy in the seventeenth century, of an elaborate stone façade being provided in a mosque otherwise constructed in plastered brick. This façade contains several niches, terminating in shell-like ornament or stalactites, and is crowned by a frieze or band of Kufic characters with a small decorated moulding over. The Ayyūbid mosques do not show any advance on this type, but in the first buildings of the Mamelukes there is a step forward. The great mosque of Baybars az-Zāhir (1266-9), on the 'Abbāsiyyah road outside the old walls of Cairo, has great porches on three out of its four sides, and the walls are crowned with saw-tooth battlements which are now largely in ruins. Beneath the battlements is a bold string-course. The walls are of dressed stone, with a splayed plinth. The porches are vaulted and deeply recessed, and are adorned with carved stalactite-niches and decorative plaques. The same sultan also used heraldry in others of his buildings.

The façade of Qalāwūn's mosque (1284-5) in Cairo is perhaps the finest in the city. It is treated as a blank arcade, the arches being very deeply recessed and having simple pointed heads. The windows in the upper part of these arches consist of two semicircular-headed lights with Corinthian shafts between, and a circular light over, the openings being filled with tracery. A deep band of Kufic lettering extends across the whole façade at about one-third of its height. Bold string-courses are used, and a saw-tooth or crenellated parapet adorned with carved decoration. The whole of the flat surfaces, as well as the piers and voussoirs of the arches are covered with striped or chequered decoration, and the general appearance of the building has a close resemblance to contemporary work in Genoa and other Italian cities, with which Egypt had, at that time, intimate commercial relations.

The mosque of Muḥammad an-Nāṣir (1318-35) in the Citadel at Cairo has a façade of uncompromising severity, the masonry being unrelieved by 'stripes' or string-courses or ornament. There is only one row of simple pointed windows, in the upper part of the façade, and the projecting porches are of the plainest character.

The colossal façade of the mosque of Sultan Ḥasan (1356-63) is divided into narrow bays by heavy stone piers, a treatment resembling that now adopted for factory-buildings. Between the piers are eight tiers of rectangular windows of various sizes, filled with gratings. The whole façade is crowned by an enormous cornice consisting of several rows of stalactites, and a smaller stalactite cornice crowns the head of each recess on the façade. This very austere arrangement forms a foil for the solitary but striking feature that relieves it, the gigantic vaulted porch at one end, with stalactites over.

The façades of mosques of the Circassian mamelukes show a distinct advance on those of the earlier period, and for the most part comply with the following description. Except for the entrance porch (which is invariably the main feature of the façade), the minaret, and the dome, the general treatment is very flat. Piers of slight projection divide the façade into bays. Between the piers are two tiers of windows, in recesses crowned by stalactites. On the ground-floor (the level of the floor of the mosque, usually some six feet above the level of the street outside) the windows are rectangular, filled with iron or wooden gratings and provided with shutters on the inside. The upper windows have generally semicircular or pointed heads, the use of horseshoe or Persian arches on these façades being almost unknown. Sometimes these windows are single, and of considerable breadth; in other cases two lights are used with a circular light above. In such cases the twin lights often have stilted semicircular heads, and detached shafts between the lights. In a few instances three lights are used, with one tier of two circular lights above, and then another circular light, the whole group being surrounded by a moulding and thus resembling the European Gothic treatment. This method is usually employed in the 'gables' of a square tomb-chamber surmounted by a dome, as described below. Stucco tracery and coloured glass, if such be used, is confined to upper windows, the lower tier being shuttered. The hard lines of a rectangular window on a façade are usually disguised by the use of a cambered relieving arch over a flat arch, both having ornamented joggled lintols.

A rectangular door-opening in a porch is treated in the same way, the height of the usual type of porch, with a stalactite vault over, being many times greater than that of the actual doorway. The proportions and general design of porches in the period of Qāyt-Bāy and al-Ghūrī are almost invariably excellent, and even the smaller examples in narrow streets display Arab architecture in its most attractive form. They usually have a pointed trefoil head, the whole porch being surrounded by an interlacing moulding, and sometimes this interlacing moulding is also used to form a rectangular frame round the whole composition. Above the actual doorway is often a small rectangular window of more ornate design than is employed on the remainder of the façade. The topmost portion of the trefoil is a simple vaulted niche. Beneath this are the stalactites that are so common in all the mameluke porches in Cairo. Gayet has shown¹ how a typical stalactite-porch of this kind is drawn geometrically, and his admirable diagrams explain the somewhat complex setting-out far more clearly than is possible in words. In the brick-built porches of the 'Delta' style after the Turkish conquest, there are frequently stalactites of a coarser type, constructed in plaster

¹ A. Gayet, *L'Art arabe* (Paris, 1893), pp. 152-6, and figs. 63-5.

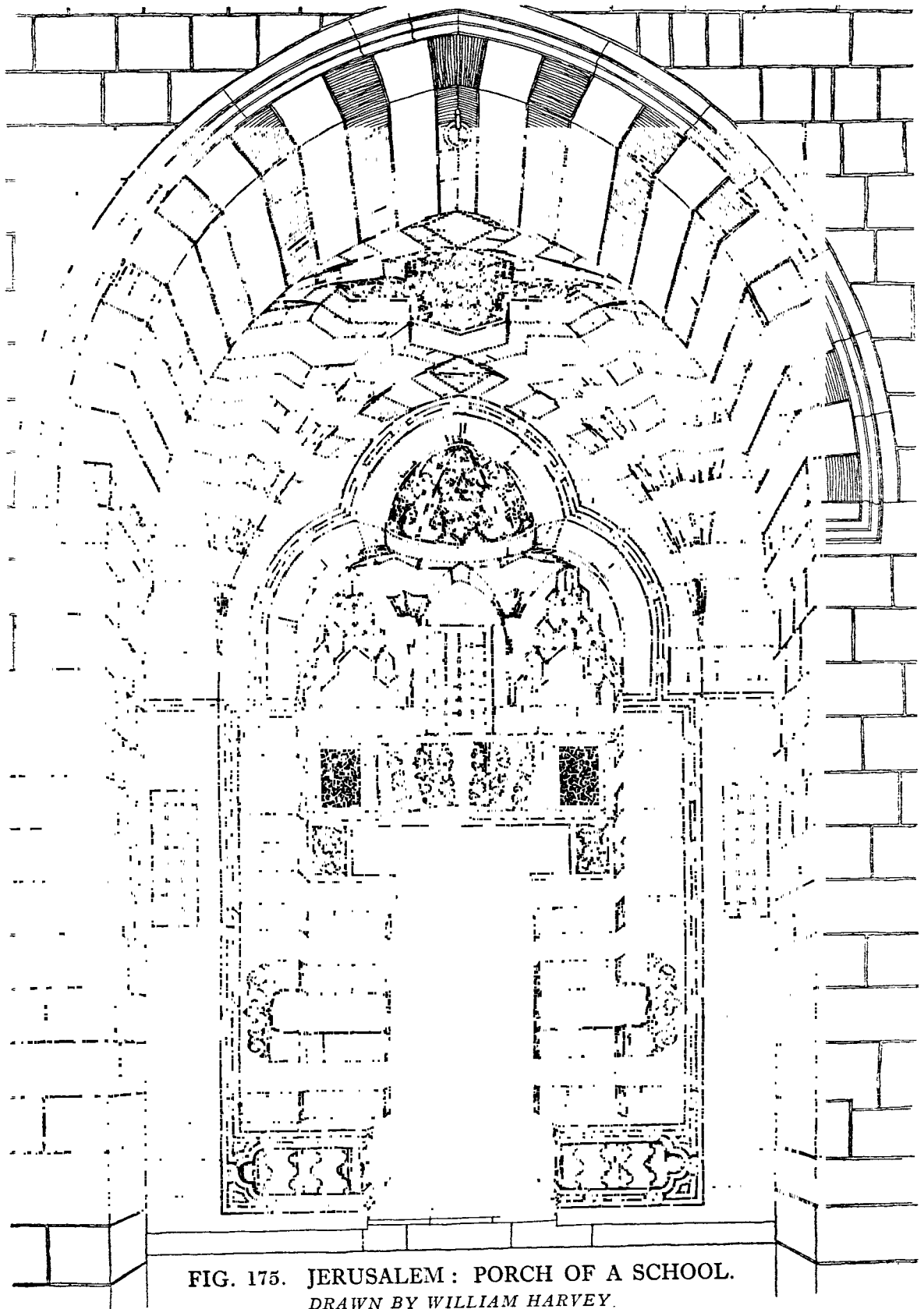


FIG. 175. JERUSALEM: PORCH OF A SCHOOL.
DRAWN BY WILLIAM HARVEY.

in the form of pendants. A still more remarkable feature is the use of so-called brick 'candles', slender cylindrical pendants, apparently of brickwork, but formed of small circular bricks hung like beads on a wooden core which is suspended from above. A disc at the lower end of this wooden rod prevents these ridiculous 'bricks' from falling away. Nothing can be said in favour of the stone pendants used in Gothic fan-vaulting on the score of truthful construction, but it is doubtful if any feature in all architecture is less to be defended than these Rosetta 'candles' (Fig. 145).

The appearance of the lofty and graceful porches of the later mediaeval mosques of Cairo is enhanced by the flights of steps, single or double, that lead up to them. As a rule they are constructed of marble, with a low balustrade decorated with marble finials of simple design.

The type of parapet generally found in these mosques is almost always foliated, the degree of elaboration increasing in the last period when surface decoration was sometimes used in addition (Fig. 176).

There is a good deal of misapprehension among the general public as to the types of arches used by the Saracen builders. It is commonly thought that the horseshoe arch was the invariable type, often in a florid and exaggerated form. On the contrary, one finds the pointed horseshoe arch very sparingly used, generally only for the large arches of the *liwānāt* of cruciform mosques and for the arcades of colonnaded mosques. On the façades it is hardly ever to be seen. The round horseshoe arch, used in the Great Mosque of Damascus in the eighth century, and so largely in Spain, is found in an arch at the mosque of Ibn Ṭūlūn (876-9) in Cairo, but hardly ever again in important examples. The Persian or keel arch was characteristic of the Fāṭimid and Ayyūbid periods, but survived in occasional examples such as the Bath of the Amīr Bashtāk (1341) and even in some of the work of Qāyt-Bāy. The cusped arch is exceedingly rare, the ogee form equally so. The trefoil arch is largely used, as mentioned above, for porches. The simple pointed arch was extensively used in the thirteenth century, perhaps because of intercourse with the Crusaders, but its use persisted right up to the Turkish conquest. The semi-circular arch, used in the Fāṭimid period as well as in the semi-Byzantine

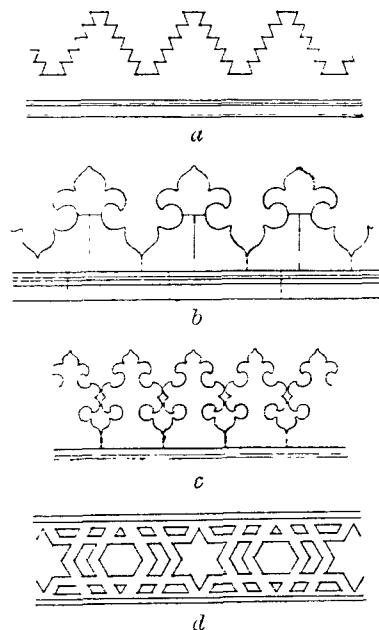


FIG. 176. CAIRO: TYPICAL PARAPETS. *M.S.B. del.*
a, d, Fāṭimid; b, c, Mameluke.

'Dome of the Rock' at Jerusalem, was equally popular throughout the Middle Ages in Egypt and Syria. It is, in fact, this freedom from the extravagance of design found in the extreme eastern and western provinces of the Saracen empire that makes the architecture of Cairo, Damascus, and Jerusalem so attractive to the European mind, and it was owing to constant intercourse between Europe and these countries during the Middle Ages that a certain architectural affinity was established.

The characteristic that differentiates the Saracen pointed arch from the Gothic is that in the former a keystone is always used, whereas in European pointed arches there is a vertical joint over the intersection.

Of vaulting, with the exception of dome-construction and stalactite-vaulting, little need be said here. The Arabs understood the use of all the simpler forms of vaulting, including barrel, groined, and ribbed vaults. Examples are to be found in their city gateways, in their castles, and in a few mosques such as that of Baybars az-Zāhir outside Cairo. But they never developed vaulting to the extent of the European nations, and they concentrated on their unique stalactites while lierne and fan vaulting was being evolved in England and France.

It is strange that the dome, an essentially Christian feature in the eyes of the early Arabs, came to be so prominent an element in their architecture. They adopted it, indeed, in one of their earliest buildings, the Qubbat aṣ-Ṣakhrāh at Jerusalem.¹ The Great Mosque at Damascus had a dome that was the admiration of early travellers.² Yet in both these cases the mosques were probably designed by Christian architects or by architects trained on Byzantine lines. Moreover, both these famous domes were constructed of wood, perhaps owing to the prevalence of earthquakes in Syria, and in the former case, as repeatedly noted in this book, the building was a shrine over the Holy Rock rather than a mosque proper, and above all a building of markedly Byzantine character. In their remaining early mosques, up to the end of the eleventh century, the only domes that the Arabs permitted themselves were of small size, and were rather lanterns to light the space in front of the *mihrāb* and to accentuate its importance than domes strictly so called. Gayet attributes this hesitation to the fact that the Copts were particularly fond of domes for all their buildings, and instances the case of a powerful *amīr* who asked his architect to provide him with a mosque that should stand even if all Cairo perished in flames, but only obtained a wooden ceiling in spite of his request. Gayet then propounds the ingenious theory that the eccentric Ḥākim, during his nocturnal prowls in the desert near Cairo, conceived the idea of a small domed tomb-chamber, possibly from Coptic prototypes that he saw

¹ See p. 36.

² See p. 43.

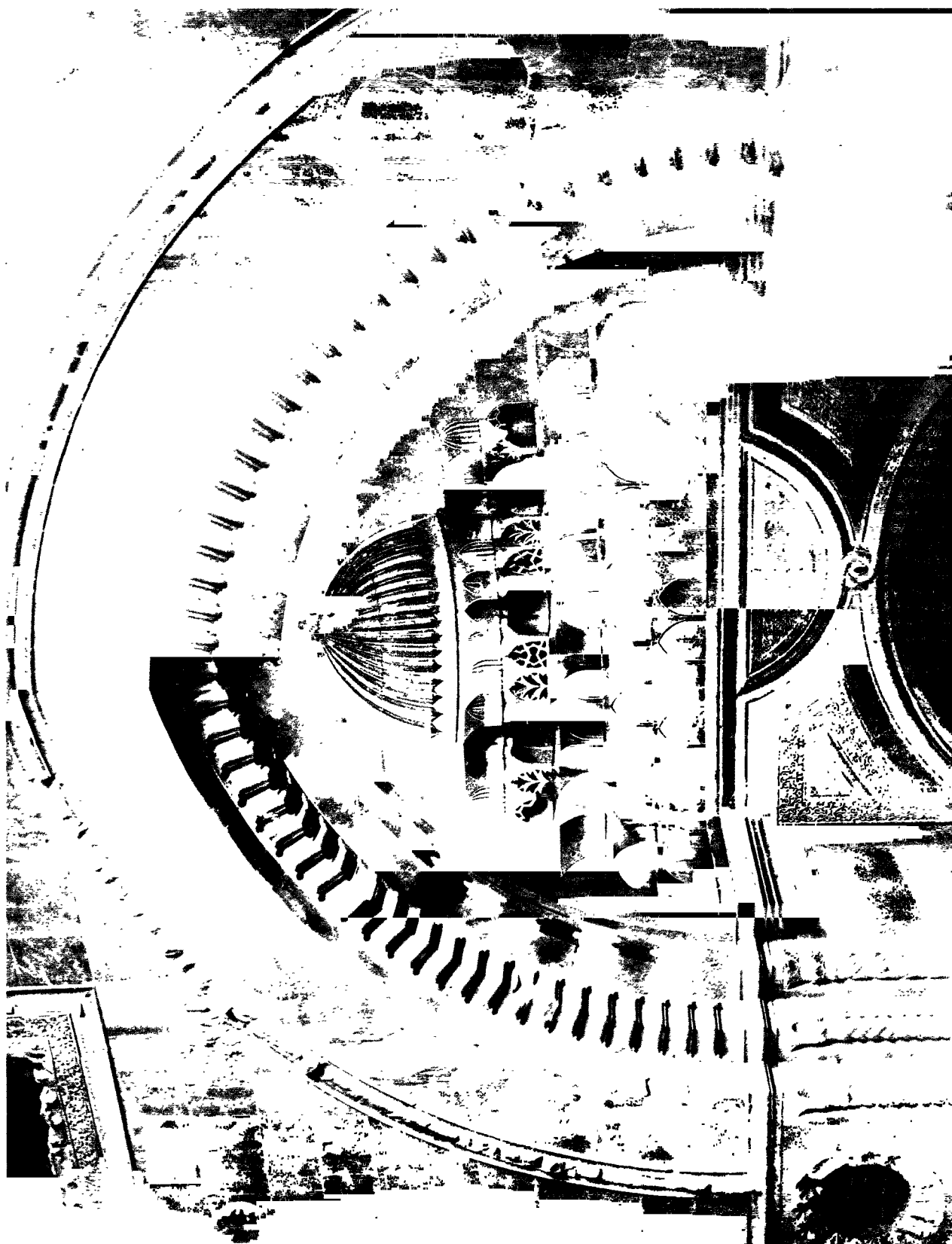


FIG. 177. DAMASCUS: KILĀN ASAD PĀSHĀ. DOOR-HEAD



FIG. 178. CAIRO : a typical dome

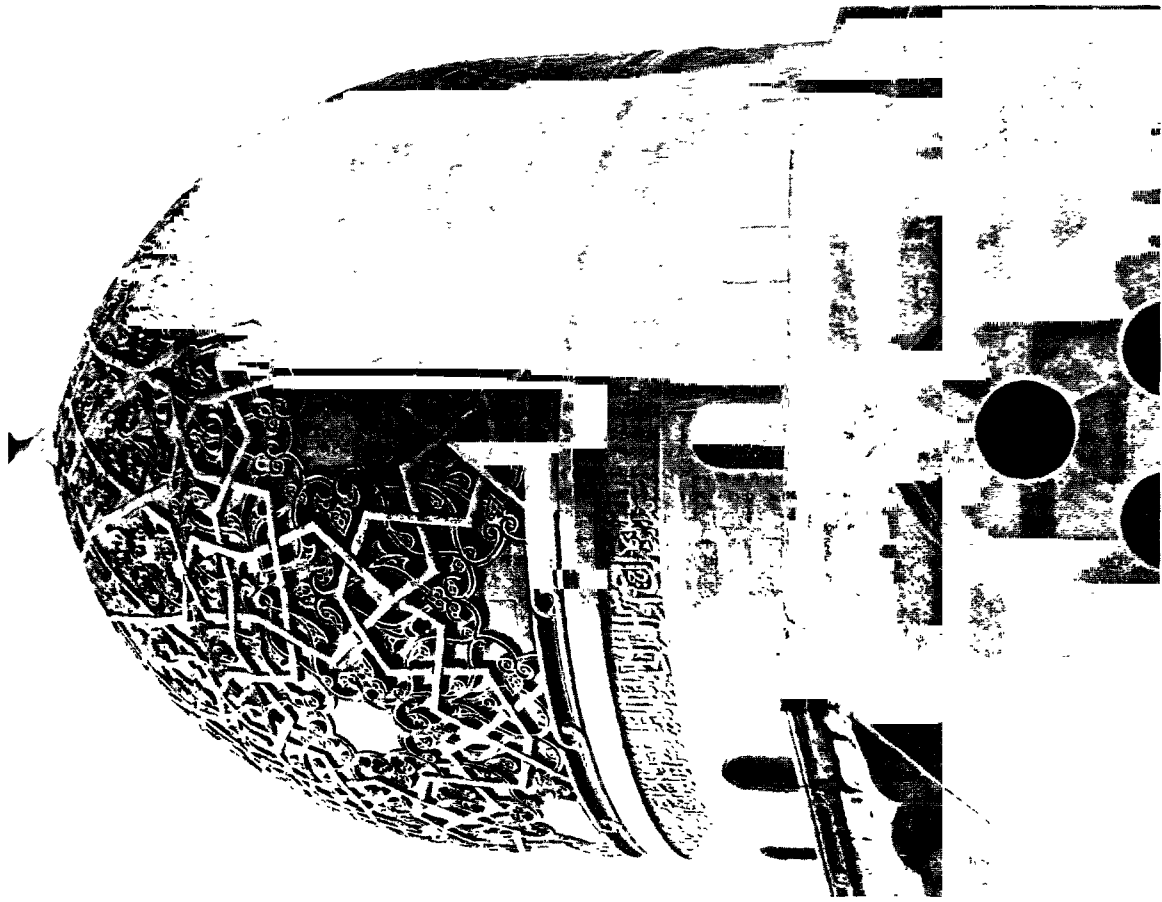


FIG. 179. CAIRO : MADRASAH OF QĀYT-BĀY *ca.1414* minaret, Dome

on these lonely excursions. At all events, Rivoira, the most guarded of critics, considers that the small brick dome of Ḥākim's own mosque is either an original structure, or at least that it preserves its original form. A century later the remarkable little mosque of al-Juyūshī (1085) near Cairo was erected, with a brick dome on niche-pendentives over the sanctuary. These Fāṭimid domes were slightly pointed in section and rested on four squinch-pendentives with small windows between, but it does not follow that because a dome rests on this type of pendentives it is necessarily Fāṭimid. In certain examples found in Cairo in the twelfth century a slight development in the pendentive appears, there being two tiers of niches, three in the lower tier and one above. The single windows between the pendentives are also replaced by groups of windows. The interior of these domes and their niches was plastered. But, from this period onwards, the dome ceased to be used in an ordinary mosque, and was used exclusively for the mausoleum-mosque or tomb-mosque. Lane-Poole attributes the origin of this practice to Babylonia, where from an early period graves had been marked by a tomb, but to any one who is familiar with the remarkable early Christian burial-grounds in Egypt (as, for example, at al-Bagawat in the remote Khārigah Oasis) it would appear that a Coptic origin is at least equally probable.

Once accepted, the dome as adopted by the Arabs developed very rapidly, and Cairo furnishes a lengthy series illustrating the process though there are very few examples surviving earlier than the end of the thirteenth century. The dome over the Mausoleum of the Abbāsid Caliphs (1242-3) has pointed niches. That of the Mausoleum of Qalāwūn is modern, and another well-known example, in the mosque of Muḥammad an-Nāṣir in the Citadel (1318-35), was constructed of wood. But from the beginning of the fourteenth century practically all domes had stalactite pendentives, either cut in the solid stone courses, which were built horizontally, or modelled in plaster on a brick core. One of the finest examples is to be found in the Bath of Sultan Mu'ayyad (1420). In some cases, such as the mausolea of the Amīr Shaykhū (1355) and Sultan Ḥasan (1362-3), the original dome has been replaced in the Turkish period. Creswell has pointed out a singular and apparently ephemeral revival of squinch-pendentives in several domes of the third quarter of the fourteenth century. A late and remarkable example of stucco stalactites may be seen in the great Fadawiyyah Mausoleum (1479-81) adjoining the Barracks at 'Abbāsiyyah near Cairo, the neighbouring Mausoleum of Tūmān Bāy (1501) being a stone construction. The inner surface of the dome was finished in various ways, sometimes being ribbed or fluted.

The whole development of dome-design during the fifteenth and

sixteenth centuries may be studied in the Qarāfah or Eastern Cemetery of Cairo. Incorrectly styled the 'Tombs of the Caliphs', these numerous buildings are the mausolea of amīrs and court officials. The method of setting-out the outline of the characteristic stilted and slightly-pointed Cairo dome has been illustrated very clearly by Lane-Poole,¹ and the shape has been aptly compared by M. Saladin to that of a casque without a visor. The exterior was occasionally left plain, but in Cairo nearly always fluted or decorated with chevrons or geometrical patterns. Fluting seems to have been practised in all periods, and usually denotes a brick dome covered with plaster. The method of fluting

varies, giving a clue to the date. Some of the best examples of fluted domes are found in the so-called 'Tombs of the Mamelukes', south of Cairo.

According to Franz Pāshā, the first stone dome in the Qarāfah or in the Cairo district is that over the great Mausoleum of Barqūq (1400-01). It is also the first to be decorated with zigzags or chevrons. The next step was the introduction of geometrical ornament, carved out of the solid stone of the dome, an example of the transition being furnished by the Mausoleum of Ināl (1450-6), where interlacing lozenges are

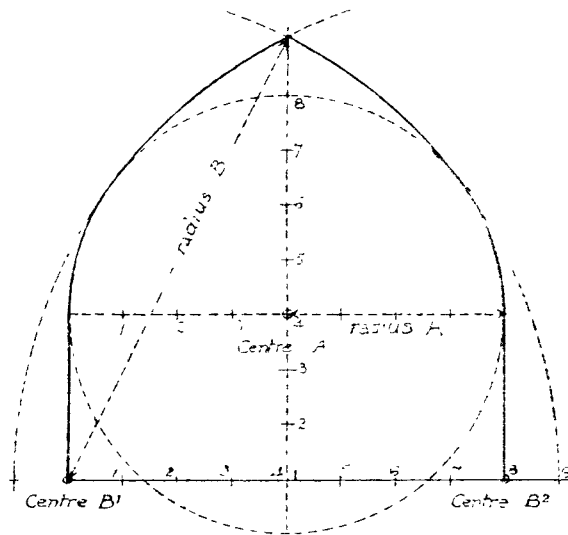


FIG. 180. SETTING-OUT OF A TYPICAL CAIRO DOME (after Lane-Poole).

used at the base of the chevrons. But interlacing patterns are found fully developed on the mausolea of Sultan Bārs-Bāy and of the Amīr Jānī-bak, two adjoining tombs both erected in 1432. Conventional floral forms were next combined with the geometrical pattern, as in the beautiful dome of Qāyt-Bāy's mausoleum (1472-4), and finally all straight lines were discarded and a foliated pattern carved all over the dome, as in the little tomb of the Amīr Sulaymān (1543), perhaps the most charming monument in all that vast collection. There is only one case of a lantern being used to crown a Cairo dome, the usual finish at the top being a curious turned finial surmounted by the Muhammadan crescent. The drum was usually octagonal or dodecagonal, occasionally circular, and in a few cases covered with glazed tiles.

The transition from the square form of the substructure to the circular plan of the dome was one of the most difficult problems set

¹ Lane-Poole, *Saracenic Art* (London, 1886), p. 62, fig. 6.

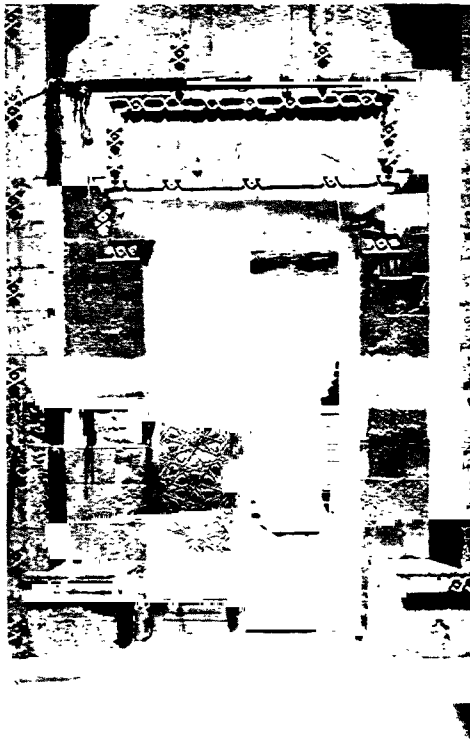


FIG. 181 CAIRO
Doorway in Shari' An-Nahhāsīn

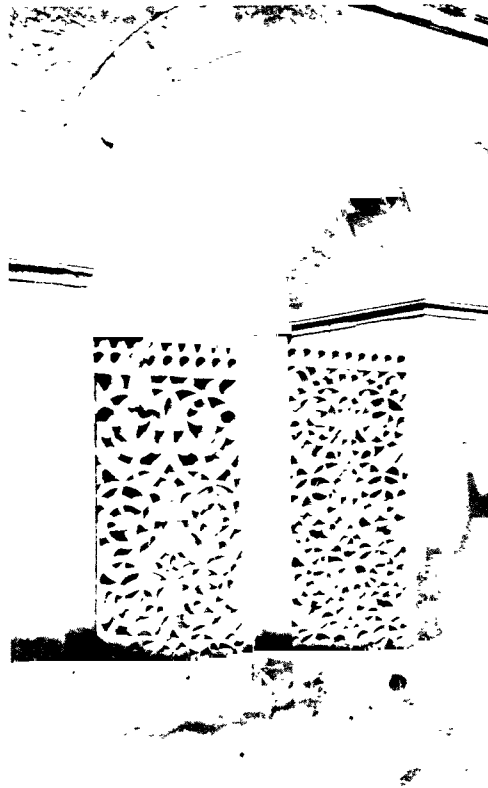


FIG. 182 CAIRO
Madrasah of Salār and Sanjar Al-Jāwli
Pierced stone screen



FIG. 183 CAIRO
Mosque of Abū Ar-Raḥmān Katkī 127
Carved screen

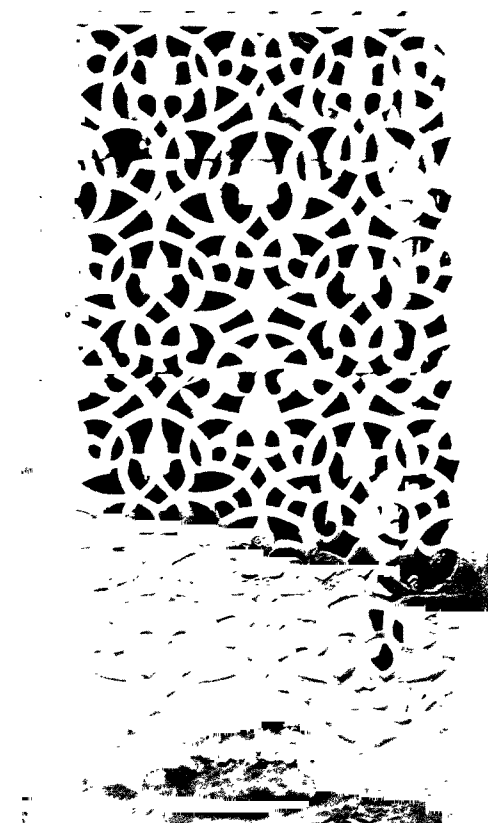


FIG. 184 CAIRO
Madrasah of Salār and Sanjar Al-Jāwli
Pierced stone screen - Detail

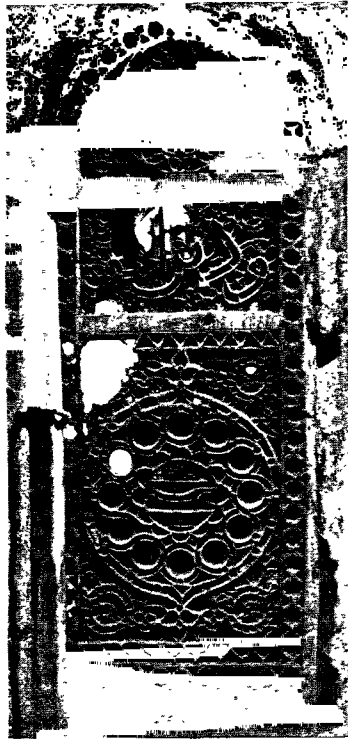


FIG. 185. CAIRO
Mosque of Jamāl Ad-Dīn Yūsuf
Al-Ustālar Qamariyyah

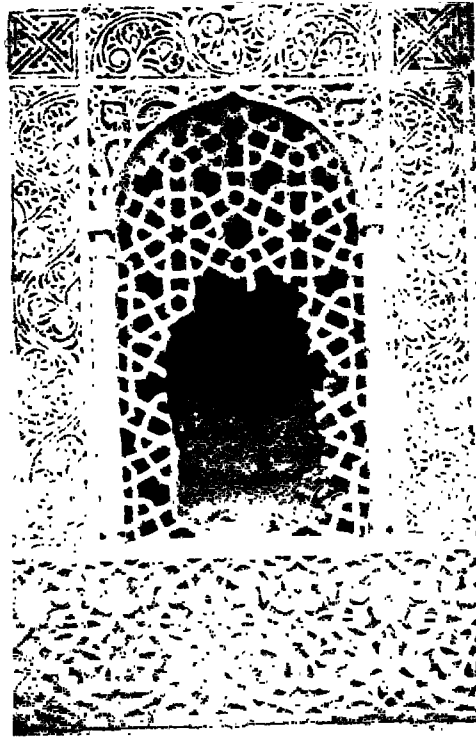


FIG. 186 CAIRO
Mosque of Qūṣūn Qamariyyah



FIG. 187. CAIRO
Carved stonework in Sharia
Marassina

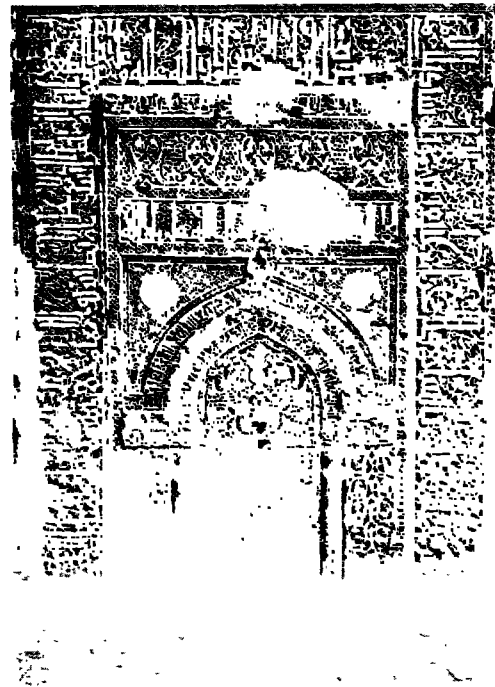


FIG. 188. CAIRO
Mosque of Ibn Tūlūn. Stucco panel on east
arcade

for the Arab architects. In a few cases, as at the Fadawiyyah Mausoleum, no attempt at a connecting-link is made. More usually, the change is effected by a series of facets or dihedral slopes in dressed stone. But in the later examples the pyramidal form was abandoned for great scrolls carved on the sloping stone surface, producing the effect of huge brackets or consoles.

The subject of wooden domes will be touched on in the next chapter. But there remains a curious and exotic type, the bulbous or Tartar cupola, introduced like other foreign features from Turkestan, Persia, and Mesopotamia, where it is the prevailing form. Cairo possesses an example in the Sulṭaniyyah Mausoleum, a large building dating from the second quarter of the fifteenth century. The type of dome, Byzantine in its low elevation, introduced into Egypt and Syria after the Turkish conquest, is another alien importation, and has already been sufficiently discussed in Chapter VIII.

A further element borrowed from Tartar sources in the second half of the fourteenth century is the curious *mabkharah* form of tower or minaret, of which the most familiar examples in Cairo are those of the Zāwiyat al-Hunūd (c. 1250), of the Madrasah of aṣ-Ṣāliḥ Ayyūb (1241-4), and of the mosque of Ḥākim (1303). Rivoira, however, attributes the origin of this feature to ancient India, but the examples he illustrates are not very convincing.

If the Arab architect displayed his skill most effectually in designing domes over tombs, it was no less evident in the minarets of the mosques. The derivation and development of this form has been discussed in previous chapters of this book. Among the earlier minarets perhaps the most noteworthy feature is the use of a circular cornice to the square base, the projecting segments of the cornice being supported by tiers of stalactites, as in the Madrasah of Muḥammad an-Nāṣir (1295-1304) in Cairo. The minarets of the mosque of Muḥammad an-Nāṣir (1318-35) in the Citadel at Cairo are remarkable for the encaustic green tiles used on their cupolas, a fashion borrowed from Persia. Generally speaking, the stone minarets of the mameluke period are built in diminishing stages, the lowest stage almost invariably square, the next stage or stages octagonal, and the upper stage either circular or open (the last method producing a lantern or loggia of light columns supporting a small cupola). The cupola is almost always continued upwards to form a stone pinnacle in the shape of a baluster, terminating in a finial crowned by a crescent. From the pinnacle project, at an angle, numerous wooden posts or brackets on which lamps are hung on the occasion of special festivals. These lamp-brackets detract from the graceful beauty of the minarets, which attained their highest point of design in the time of Qāyt-Bāy. Each stage is usually marked by

a cornice of stalactites, and on some of these cornices there are balustrades forming galleries for the *mu'adhdhin*. The masonry of these minarets is nearly always excellent. Cairo surpassed all other cities in the development of this feature, as in the number of examples still existing, and the typical Cairene minaret surpasses anything found in other Muhammadan countries from the point of view of design and craftsmanship. Some Arab examples are inferior in design, such as the hideous two-headed minaret erected by al-Ghūrī at al-Azhar early in the sixteenth century, but they are very few. After the Turkish conquest we find a great change. Occasionally the Arab type was reproduced, as in the mosque of al-Burdaynī at Cairo, and of the Turkish or 'pencil' type there is a good instance in the Takiyyah at Damascus (Fig. 134). But in general the Turkish minarets of Cairo are weak and even ugly in appearance, usually plain or fluted circular shafts of medium diameter, terminating in a clumsy gallery for the *mu'adhdhin* and a pointed top. Much more attractive are the sturdier stone minarets found in Palestine and Syria, with a bold pent-house treatment in their upper storeys.

The craftsmanship of stalactite ornament in all parts of mameluke buildings is important, but difficult to explain briefly without an elaborate use of geometrical terms and formulae, and without entering into a highly technical discussion of stereotomy requiring many diagrams. The general principles may be found in the work of Gayet already quoted in this chapter, in Spiers' account¹ of the method adopted by modern Persian craftsmen in setting-out the stalactite, cornices, and pendants required for a rectangular ceiling, and in the larger volumes of Prisse d'Avennes. It may, however, be noted that the various provincial schools of Muslim art produced several characteristic and distinctive varieties of stalactite, although the feature is peculiar to the buildings of Islam.

The stone corbels used for supporting the projecting upper storeys of houses, especially in Cairo, are usually of very bold design and sometimes of attractive form. Stalactites and other geometrical ornaments are freely used to embellish them.

Although the mediaeval builders of Egypt never evolved any architectural orders, they used antique columns and capitals freely in a way of their own. Generally the ancient shafts employed were of limestone or marble, but in certain instances, e. g. in the mausoleum at Qalāwūn and in the mosque of Muḥammad an-Nāṣir in the Citadel of Cairo, great columns of porphyry or granite were used. In the larger colonnaded mosques these shafts borrowed from various sources naturally presented a considerable variety in height and diameter, the

¹ R. Phené Spiers, *Architecture East and West*, p. 37.

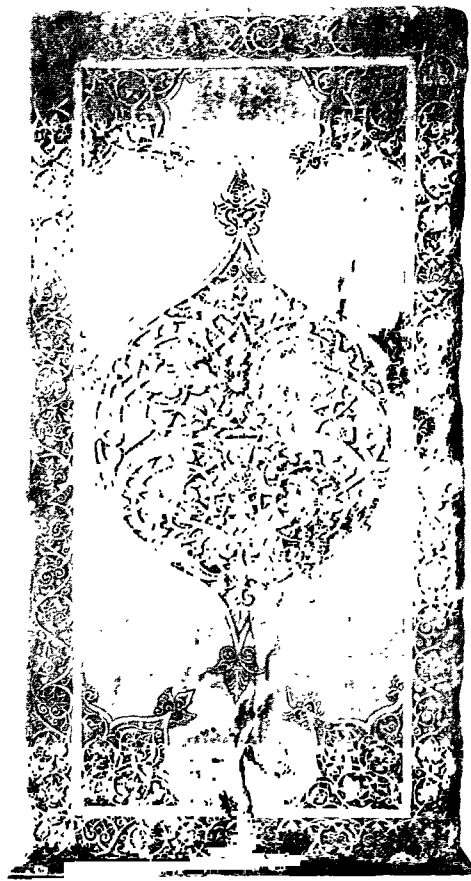
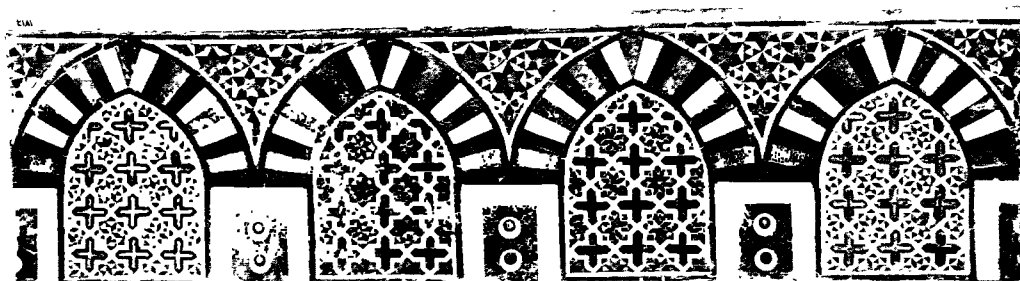
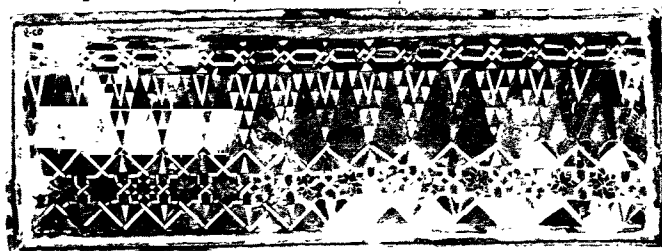


FIG. 189. MARBLE PANEL

Cairo : Arab Museum



FIGS. 190-92. PANELS IN MARBLE MOSAIC. Cairo Arab Museum



FIG. 193. MARBLE FOUNTAIN BASIN. London : Victoria and Albert Museum

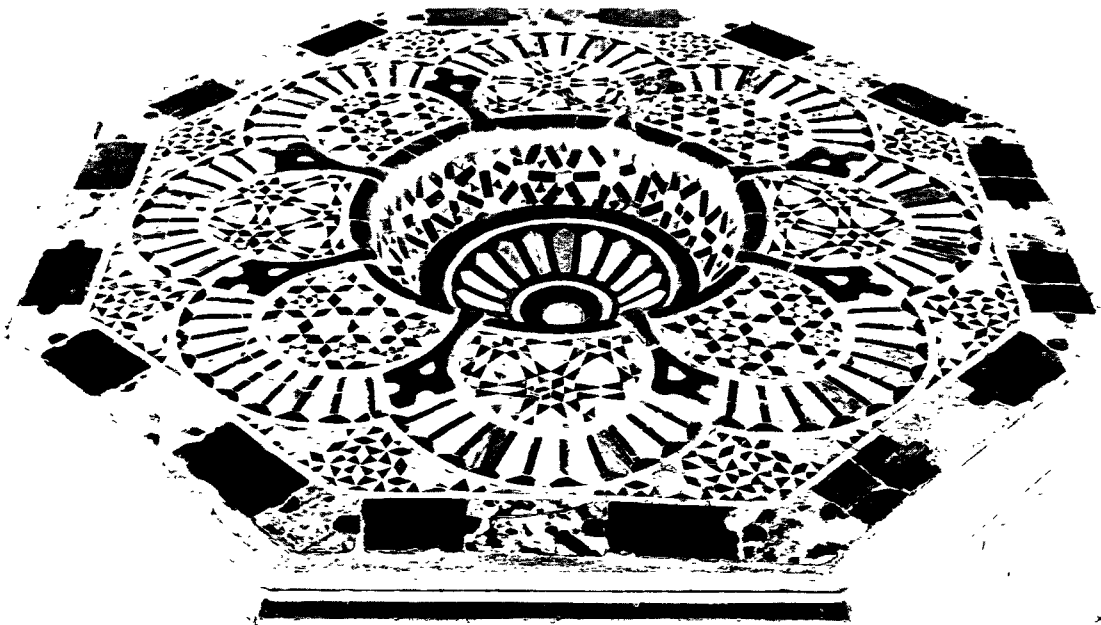


FIG. 194. OCTAGONAL BASIN IN MARBLE MOSAIC. London : Victoria and Albert Museum

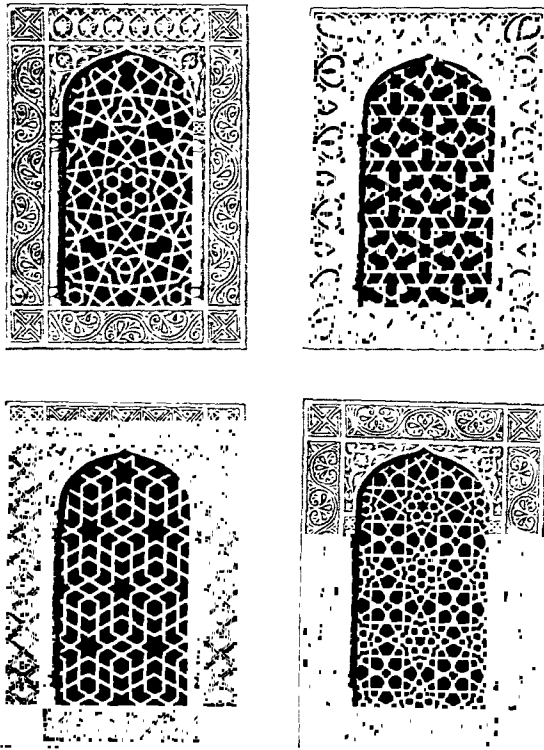
former shortcoming being met by a variety of more or less clumsy expedients, usually by increasing the base or providing a new base. Even columns with vertical or spiral fluting were so employed. Similarly carved capitals of all types from the classic Roman Corinthian to late Coptic and Byzantine 'basket' forms were utilized, often raised by means of a dossier. Where new capitals were provided (as nearly always for the mihrābs, where presumably any Christian or pagan relics would be least appropriate) a simple form resembling an inverted bell was used, a precisely similar type in a reversed position being used for bases. Only occasionally do we find a carved capital of any originality produced, generally with stalactites as its chief decorative feature, the Arabs often remaining content with a clumsy modification of the Corinthian and Byzantine types that they borrowed so freely from ancient buildings. Cairo furnishes no series of original capitals comparable in inventiveness with those of the Alhambra in Spain.

Though mouldings were used by the Arabs very seldom, and then as a rule only as simple string-courses of no particular note, they employed, especially in their porches and façades, one very beautiful interlacing moulding consisting of two beads separated by a hollow. At regular intervals these beads intersected to form a hexagon (Fig. 187). A fluted moulding was also often used round doorways (Fig. 69), especially in early mameluke days, when there was a tendency to use a pointed arch with surrounding mouldings in the European fashion borrowed from the Crusaders.

Stone-carving, as practised by the Arabs, was nearly always in low relief. The inscriptions so often found in the mosques were usually sunken if carved in stone, and raised if carved in marble or stucco. Stone was used for various minor accessories of the building, including the *dikkah* or tribune, the *mimbar*—(there is a fine example in the mausoleum of Barqūq *extra muros* presented by Qāyt-Bāy in 1483, richly carved with geometrical patterns)—and the *mihrāb*. But the *mihrāb* was more usually lined with marble, though in Rosetta we find instances of a brick treatment.

Marble is found to a limited extent in Egypt and the neighbouring lands, but it was generally obtained by plundering old buildings, whole shiploads of marble being imported from Syria to Cairo to gratify the tastes of the mamelukes. The use of ancient marble columns and capitals has already been mentioned. The same material came to be widely adopted from the thirteenth century onwards for the covering of floors and the lining of walls and *mihrāb* niches. Marble was used as a thin veneer, in large panels, sometimes showing the veining, or in small squares as mosaic. Mosaic pavements, either *opus Alexandrinum* or other forms, were largely used in Egypt and Syria before the Arab

conquest, and there was no lack either of craftsmen or of models. The South Kensington Museum contains a number of typical specimens of dados in marble mosaic, chiefly from seventeenth-century buildings in Damascus, but there are also a few specimens from Cairo showing the use of dwarf columns of turquoise-blue glass, often found in the lining of the *mīhrāb* niche. Another interesting specimen at South Kensington is the marble mosaic basin, often used in the floors of the chief rooms in



FIGS. 195-98. CAIRO: EXAMPLES OF PIERCED WINDOWS (*QAMARIYYAH*). After Prisse d'Avennes.

bearing the name of al-Malik al-Manṣūr Muḥammad (Fig. 193); as well as a white marble stand for a water-jar (Cairo, thirteenth century) and an inscription in Kufic characters carved in soap-stone (fourteenth century). Another important example already mentioned in this book (p. 123) is the out-door pulpit of the Qādī Burhān ad-Dīn (1456) in the Ḥaram ash-Sharīf in Jerusalem (Figs. 111-12).

The use of stucco in the early periods has been touched on in Chapters III and IV, but it was not until the period of the Mamelukes that it attained its highest level of craftsmanship. It was then chiefly employed for two purposes, in the curious and delicate tracery of the *qamariyyah* or pierced window, and in bands or panels of ornament

the larger houses of Cairo and Damascus as described in Chapter IX. Mother-of-pearl was also largely used in combination with marble mosaic, and in Damascus in the seventeenth century thin plates of metal were introduced in addition. The *suffah* or sideboard used in the larger Arab houses was usually treated with marble mosaic.

Of carved objects in marble, a great variety still remains. The Arab Museum in Cairo contains a very beautiful panel carved with an ogee design in low relief (Fig. 189). An equally beautiful example of very different character is the pierced marble grille in the mausoleum of the Amīrs Salār and Sanjar al-Jāwli (1303-4) in Cairo (Figs. 182, 184). The South Kensington Museum contains a magnificent example in the creamy-white marble fountain-basin (1278) from Ḥamā in Syria,

on flat wall surfaces and round the drums of domes, also for stalactites over pendentives and niches. The *qamariyyah* or *shamsiyyah* assumed two forms. In the congregational mosques with open-arcades it simply formed a screen from the sun, as in the mosques of Ibn Ṭulūn (Fig. 20) and Baybars az-Zāhir (Fig. 58). In covered mosques, e.g. in the mausolea of Qalāwūn, Salār and Sanjar al-Jāwli, and Qāyt-Bāy, it was frequently glazed from the second half of the thirteenth century onwards, as described in Chapter XIII. The early tracery was formed by cutting a fretwork pattern through a thick slab of plaster, but it may be noted that the fine *qamariyyahs* at Ibn Ṭulūn are not coeval with the

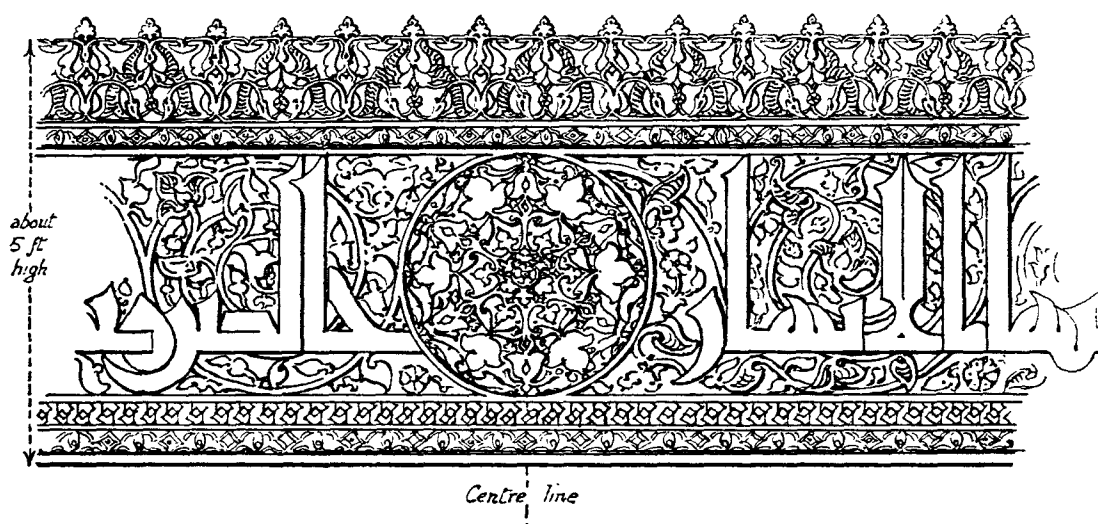


FIG. 199. CAIRO: MADRASAH OF SULTAN ḤASAN. PART OF STUCCO FRIEZE ROUND SANCTUARY. *M.S.B. del.*

building itself, but probably belong to the restoration under Lājīn in 1296. To the same period belongs the elaborate stucco panel on one of the piers of the arcading (Fig. 188). This stucco was not mechanically moulded but was carved by light and skilful hands. Some of the ornament, as, for example, the bands and friezes in the mausoleum of Qalāwūn, recall Moorish work in Spain. Early stucco-work was executed in two layers or stages, sunk ornament being first carved into the bed, after which an upper layer was superimposed to give more relief. The finest example of an ornamental stucco-frieze is probably that in the Madrasah of Sultan Ḥasan at Cairo. The interesting stucco reliefs in the Dome of the Rock at Jerusalem are of a very different character (Fig. 202) and probably date from the second quarter of the eleventh century. Stalactites in stucco are found very frequently in Cairo, a typical example being the pendentives of the dome of the Fadawiyyah Mausoleum at ‘Abbāsiyyah.

The glass mosaics in the Dome of the Rock at Jerusalem consist of three groups, and are attributed by De Vogüé¹ to Byzantine craftsmen. Those in the drum of the dome consist of conventional foliage in green and blue on a gold ground, and are dated 1027. Those on the large piers of the dome are also of the eleventh century and have the same general arrangement of colours on a gold ground. The mosaic cubes measure about 1 cm. each way. The earliest specimens are, however, those of the arcades, attributed to the seventh century and executed in light and dark blue and brown on a gold ground, studded with large jewels on the stems and leaves of the foliage as in many Byzantine works of the seventh and eighth centuries. The favourite Byzantine vine *motif* is also used.

Of the original eighth-century mosaics of the Umayyad Mosque at Damascus, so celebrated in the writings of early travellers, Messrs. Dickie and Spiers² consider that two fragments have survived the various fires that have so damaged that famous building; these are found both on the inside and outside walls of the north transept, representing trees and buildings (possibly Mecca and Medina), and also in the spandrels of the arcades near the Bāb al-Barīd. The mosaics of the dome of the mosque of al-Aqsā at Jerusalem,³ dating from the end of the twelfth century, are of less interest and inferior design.

BIBLIOGRAPHICAL NOTE FOR CHAPTER XI

See the chapters on masonry and marble in the works of Bourgoïn, Gayet, Herz, Lane-Poole, Migeon, and Prisse d'Avennes cited on p. 183.

¹ Illustrated in De Vogüé, *Le Temple de Jérusalem* (Paris, 1864), plates 21 and 23.

² *P. E. F. Quarterly Statement*, 1897, p. 273.

³ De Vogüé, *op. cit.*, plate 33.

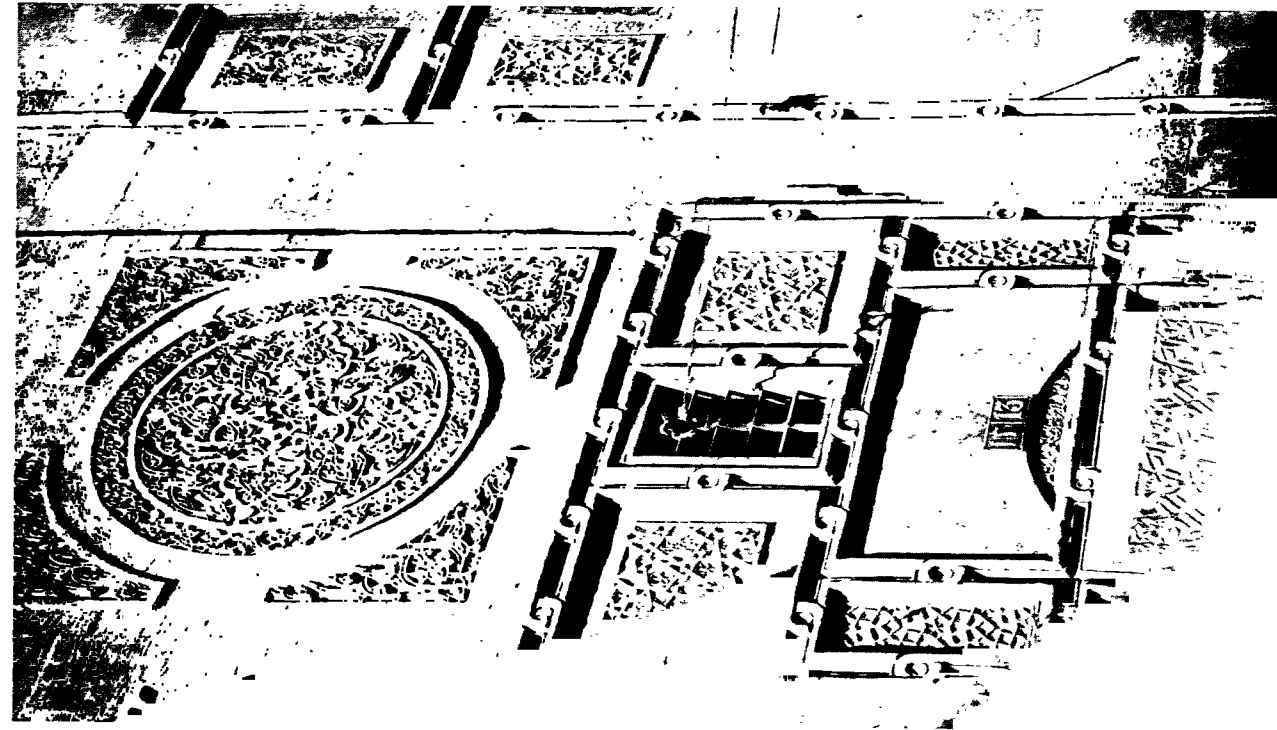


FIG. 200. CAIRO : STUCCO OF THE QAYT-BAY PERIOD

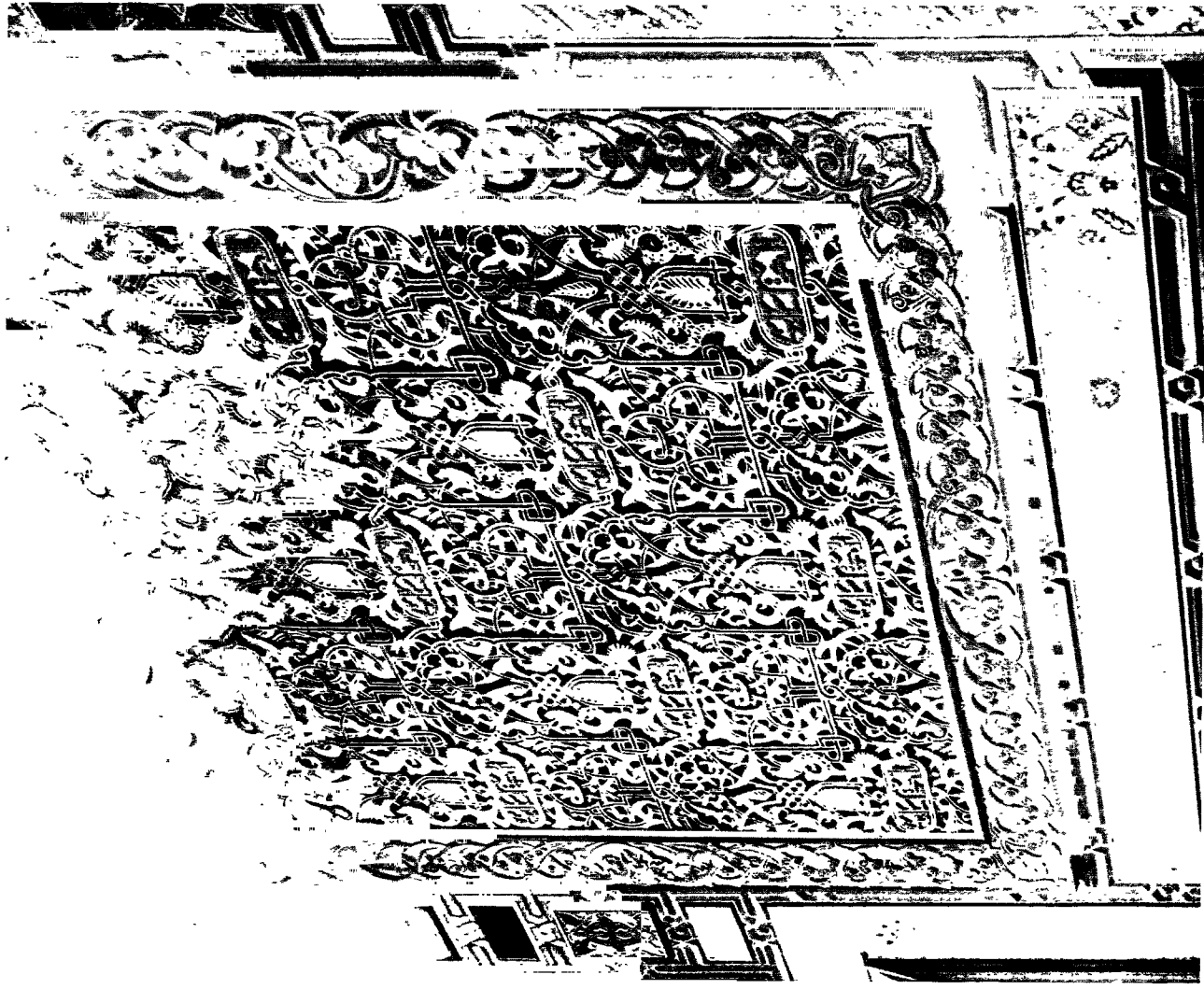


FIG. 201. CAIRO : STUCCO PANEL IN THE FRENCH CONSULATE

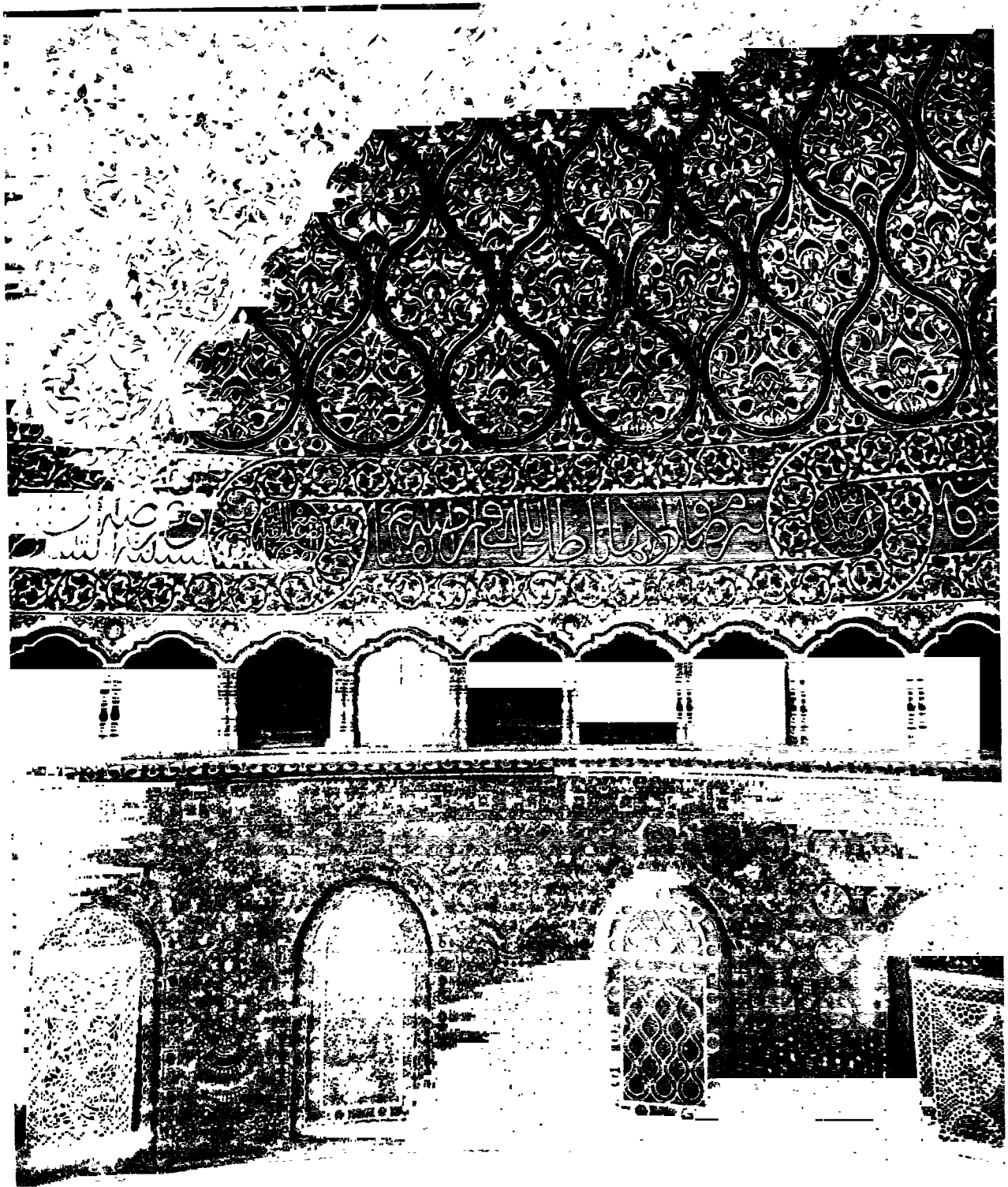


Photo : American Colony Stores, Jerusalem

FIG. 202. JERUSALEM : QUBBAT AŞ-ŞAKHRAH 'DOME OF THE ROCK'

Stucco and mosaics in the dome

XII

CRAFTSMANSHIP : WOODWORK

THERE are few countries so sparsely planted as Egypt and the neighbouring parts of Syria. In the valley and delta of the Nile, as in the various oases of the Libyan desert, the date-palm furnishes almost the only timber for building purposes as well as the most valuable property of the inhabitants. The tamarisks that spring up so hardily on the fringe of the desert are of little use, and the orange and lemon groves of Philistia provide a wood that is liable to attack by worms. The *lebbak* trees that line the long boulevards from Cairo to the Pyramids and to Heluan are of no value to the architect. The coniferous trees that afford such a welcome shade where they have been planted recently, as at Ismailia and Montaza, cannot be spared for commercial purposes. Besides these, there is only a scanty supply of a few useful varieties for building, including sycamore (*jammez*), lotus zizyphus (*nabq*), olive, acacia nilotica (*šant*), and cypress (*sarw*). Yet it is known that in the centuries when the Muslim architecture of Cairo was first developing, the Fātimid and Ayyūbid sultans instituted an elaborate system of afforestation to provide timber for shipbuilding purposes, and it is almost equally certain that some of this home-grown timber was used in the construction of mosques and houses.¹ But in spite of these unfavourable local conditions of supply, timber was freely used in all branches of building, and the dry climate gave it a far greater permanence than is possible in northern latitudes. To meet so wide a demand, pine and oak were largely imported from Turkey and teak from India. Ebony, introduced when inlaying became common, was obtained from the Sudan. Other imported woods included beech (for *mushrabiyyah* work), box, poplar (in the Turkish period), sandalwood, and logwood (*baqam*). It is recorded that timber was imported to Mecca from India as early as A.D. 664-5, and also to Jerusalem from Cyprus at an early date.

The subject of woodwork in building is most conveniently divided under the two general heads used in modern English construction, carpentry and joinery. The former comprises all structural timber of large scantling, and includes the rafters and beams of roofs, the joists

¹ Aly Bey Bahgat, *Les forêts en Égypte et leur administration au Moyen Age* Paper read before the Institute of Egypt, 1900.

of floors, as well as half-timbering, tie-beams for arches, and the timbering of wooden domes. Under the latter head are included doors, panelling in all its forms, *mushrabiyyah* or lattice-work, shop-fronts, and all the accessories of the mosque and the dwelling-house that are usually fashioned in this material.

The severer weather of Palestine and Syria precludes the use of the very primitive type of roof that has been constructed in Egypt for thousands of years and still prevails in the rude hovels of the poorer classes to this day. It consists of rows of palm-trunks resting on the mud or stone walls, plastered over with a sort of concrete formed of mud, straw, and palm-leaves. Though it affords little resistance to a heavy downpour of rain—(a rare occurrence south of the Delta)—and though it harbours vermin in great abundance, it appears to satisfy the simple needs of the *fellahin*, for whom the date-palm provides nearly every want of this life. In the remarkable town of Siwah,¹ isolated in the heart of the Libyan desert, hundreds of miles from civilization, there is a series of such dwellings, constructed to a height of ten storeys or so of mud walls and palm-trunks, resembling a gigantic grey honeycomb rather than a block of modern flats. It appears that a similar type of roof sheltered the primitive worshippers at Mecca and Medina.

In the mosque of Ibn Ṭūlūn at Cairo the arcades are covered with one of these simple roofs, consisting of rough rafters formed by cutting in half the trunks of date-palms. The three exposed faces are covered with planks, and over these is close-boarding of sycamore planks, on which rests the covering of the roof, composed of earth, lime, and slabs. Some such covering is still widely used in all forms of building in and south of Cairo. The heat of the sun is so intense that modern construction with a surface of cement or asphalt is useless, and quarry-tiles or slabs of white artificial sandstone about two inches thick, commonly called *balāt* slabs, are commonly employed instead, bedded on earth or sand as in some of the mediaeval buildings. The ends of the rafters at Ibn Ṭūlūn's mosque rest on stone corbels. The exposed casing of rafters is not moulded at the edges, but chamfered. Internally all this woodwork was decorated with painted ornament, white and red being the predominating colours, but this work may date from the restoration at the end of the thirteenth century. The ceiling was divided up by cross-pieces between the rafters to form coffering. Unfortunately this remarkable mosque was allowed to fall into decay, and when the *Comité* took it in hand some forty years ago, much of the ceiling had already perished, partly through neglect, and perhaps partly owing to being plundered for fuel or even being burned accidentally by the fires of the little hovels that had been established by homeless people of the

¹ Described and illustrated in my book, *Through Egypt in War-time* (London, 1919).

poorer classes in the arcades. As a result, only a small part of the existing ceiling is original.

The same type of flat roof and open ceiling was used throughout the Middle Ages in Egypt, and has persisted up to modern times. But where this form of construction was employed in the Mameluke mosques or in the reception-rooms of the larger houses, it was embellished with carving, stalactites, and colour-decoration as described later in this chapter. In Palestine a vaulted stone roof was more frequently used to resist a sterner climate. The sanctuary of the Great Mosque at Damascus has a modern span-roof with trusses replacing an earlier and probably similar one destroyed by fire. The centres of trusses are rather more than 8 ft. apart and the tie-beams measure 26 in. by 20 in. As explained in Chapter IX, the typical dwelling-house of all periods in Cairo has on its flat roof a *malqaf*, a curious structure of light woodwork (such as one uses to cover an enclosed escape-staircase in modern London building), which is intended to catch the cool north wind that makes life bearable in the hot months.

The construction of timber floors hardly occurs in the mosques, and where required in domestic and other buildings follows the roof-construction already described. The Arabs never used 'half-timbering' as we understand it, but, especially in the Delta towns, they introduced timber beams into the brick walls of their houses to give an additional bond. These ties or plates were placed at regular intervals, and increased in strength where they formed lintols over openings for windows or doors. They were elaborately jointed where they intersected each other at the angles of the building.

The use of the timber abacus and the timber tie-beam in mosque-arcades has already been mentioned. It is found in some of the early mosques, and in some of those of the mameluke period—such as the

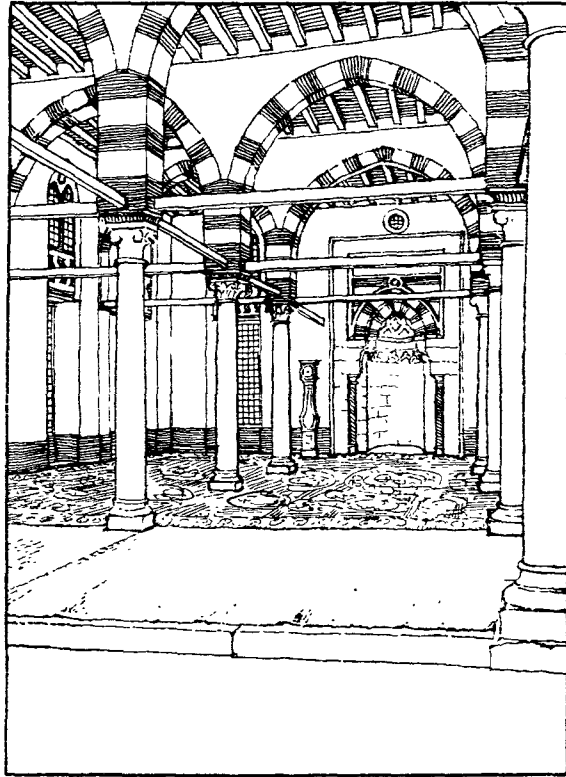


FIG. 203. MADĪNAT AL-FAYYŪM; MOSQUE OF THE PRINCESS AŞAL BÂI. INTERIOR
M.S.B. del.

large congregational mosque of al-Mu'ayyad in Cairo—of later date, but not in all, perhaps not even in a majority of the historical examples. This fact is worth noting, as the practice of employing timber ties has been a cause of some violent criticism of Arab architecture in general.¹ It certainly indicates a timidity on the part of the builders, explained by their use of borrowed marble shafts to support the arches of their arcades. They seem to have feared the effects of earthquakes, though in such cases as the mosque of Ibn Tūlūn, where a massive pier was substituted for the alien marble column, no such expedients were required. There is a precedent for the use of timber ties in Byzantine architecture, where also iron ties are sometimes cased in wood for the sake of effect.

In the Arab Museum at Cairo are preserved some remarkable dovetails of sycamore wood, used for binding together blocks of stone in the minaret of the fourteenth-century mosque of the Amīr Aqsunqur. Similar dovetails have been found in the minaret of the mausoleum of Barqūq *extra muros*.

Several examples of wooden domes are found in Egypt and Palestine. In the former country their use is generally ascribed to the prevalence of earthquakes. The great dome of the Qubbat aṣ-Ṣakhrah at Jerusalem has a double dome of wood. The inner dome has a diameter of about 66 ft., is slightly stilted in form, and is lined with painted and gilded stucco. The outer dome is covered with lead. The internal height of the inner dome is about 100 ft. above the floor. There is a flight of steps between the two domes giving access to a trap-door at the top. The date of the present structure is uncertain, possibly a restoration by Ḥākim in 1022, but in spite of various restorations after fires and earthquakes it still probably retains its original form, according to the accounts of various early writers (see Chapter II).

The neighbouring mosque of al-Aqṣà also had a dome over the central 'transept', but Rivoira adduces evidence² to show that the existing dome is not the one erected in the eighth century. The present structure he ascribes to the remodelling of the building by Saladin. It has a diameter of 36 ft., and a height of about 80 ft., is covered externally with lead and decorated internally with mosaics. The small Qubbat as-Silsilah, or 'Dome of the Chain' is similarly constructed.

Rivoira points out³ that earlier buildings in Jerusalem had wooden domes, among them the *Anastasis* of the Church of the Holy Sepulchre and the Church of the Ascension on the Mount of Olives, both rebuilt by the patriarch Modestus early in the seventh century, and attributes

¹ L. March-Phillipps, *The Works of Man* (London, 1911), p. 163.

² Rivoira, *Moslem Architecture* (London, 1918), p. 21.

³ *Ibid.*, pp. 58-9.

their use in Palestine, as already suggested in this chapter, to the prevalence of earthquakes in Palestine.

The present dome in the sanctuary of the Great Mosque of Damascus was built of stone blocks after the fire of 1893, and differs in various respects from its predecessor, also a stone structure, probably of the fifteenth century. But Rivoira¹ quotes Ibn Jubayr to prove that the original dome that the latter saw in 1184 was of wood, and closely resembled that of the Qubbat aṣ-Ṣakhrāh. It was a double dome, of hemispherical form, strengthened by radiating ribs and by tie-rods half-way up its height. The exterior was covered with lead, the interior lined with carvings and polychrome decorations.

In Cairo there are still in existence several wooden domes, with pendentives formed of wooden stalactites. Among them may be cited those of the tomb-mosques of al-ʿAynī (1411) and Sultan Ḥasan (probably 1671-2). Only the pendentives of the wooden dome of the mosque of Muḥammad an-Nāṣir (1318-35) in the Citadel remain.

In the higher part of the *qāʿah* or *mandarah* of a Cairo house a small wooden cupola or lantern (*mamraq*) was usually fixed to give light and ventilation. In some of the mosques of the late fourteenth and early fifteenth century the *ṣahn* is covered by a large octagonal lantern with a flat boarded ceiling.

But the gorgeous ceilings that characterize the chief mosques and private houses of the fifteenth and sixteenth centuries are only a development of the primitive type already used in the mosque of Ibn Ṭūlūn. Rows of palm trunks, sawn in half longitudinally, form massive joists at regular intervals and support the weight of the floor or flat roof above. The flat or sawn surface forms the upper side of the joist, so that the rounded part of the trunk is seen from the room below. But in all ceilings of any artistic pretensions one does not see the actual timber of the trunk as this is cased with thin wooden fascias. In domestic work the latter are usually curved to follow the natural shape of the joist for most of its length, but form a square section at each end, the transition from circular to square section being contrived by a system of stalactites. In mosques the beams are usually square throughout. Cross joists or struts are frequently employed to divide the space between the main beams into coffers of square or other polygonal shape. There is never a sharp angle at the junction of the ceiling with the walls. A cove, in section a quarter-circle, masks the angle, and is almost always decorated with tiers of stalactites. The cornice is built up of bracketing as in modern practice, and the ornamental features are modelled on laths or made in wood, canvas being employed both on cornices and beams as a backing for plaster enrichments. Whether

¹ Rivoira, *op. cit.*, pp. 80-1.

the decorations were carved on the solid woodwork, or modelled in *gesso*, they were usually of delicate character, thus affording a contrast with the massive and architectural form of the great beams. The system of colouring varied very little, blue and gold being the favourite tints to emphasize the dark tone of the wood background, but red was also used, and lines of white often accentuated the decorative features. In the ceiling of the mosque of Barqūq *intra muros* (1384-6), a restored example and one of the finest in Cairo, the greater part of the whole surface is covered with a layer of *gesso* with a base of gum arabic. Gilding was applied with white of egg.¹ In the original portion of the ceiling of the mosque of Qāyt-Bāy *extra muros* (1472-4), another magnificent example, which is divided into bays and then again into smaller compartments, the general tone is provided by the dark colour of the natural wood, white, gold, and blue being the colours used in the decorations.² In many cases the latter are simply painted on the wood. Cairo abounds in such ceilings, but they are also occasionally found in the towns of the Delta, as in the house at Damietta mentioned on p. 160; and there are also examples in Damascus.

The *qā'ah* of the finest old houses in Cairo is divided, as already explained (p. 152), into three sections, of which the middle one is the loftiest, and between these sections is a deep wooden beam carried on enormous wooden consoles or brackets, embellished with stalactites, carving, and other ornament. Similar consoles are used to carry a beam over each *liwān* in such rooms, as in the case of some of the later mosques, and in all such instances form part of the general design of the ceiling. The beautiful ceiling of the 'Bayt al-Qādī' (1495) in Cairo has already been mentioned (p. 156).

Another form of ceiling consisted of plain boarding nailed to the underside of the joists (which were thus concealed), and ornamented with geometrical patterns formed of thin moulded strips of wood. An example of such work is to be seen in the South Kensington Museum.³ In this case the design is one of the beautiful star-patterns described in Chapter X with small wooden roundels inserted at regular intervals. The geometrical pattern was, however, sometimes worked in strips of coloured and gilt plaster. Ceilings of this type are found over the great *mushrabiyyah* windows of many Cairo houses.

Occasionally a room had a ceiling composed entirely of stalactites. Gayet⁴ illustrates a case in point, showing how the setting-out is done. Another type of ceiling not yet described consists of a design of inter-

¹ See H. Saladin, *L'Art musulman : Architecture* (Paris, 1907), p. 143.

² Saladin, *op. cit.*, p. 161.

³ In the apse at the end of the West Hall ;

also illustrated in Lane-Poole, *Saracenic Art*, p. 166.

⁴ Gayet, *L'Art arabe* (Paris, 1893), figs. 67,

68.

lacing strips or beams with deep polygonal coffers between. This is merely an application, to constructional forms and high relief, of the delicate interlacing patterns used on walls, window-tracery, and panelling. The finest specimen exists in the Palace of the Amīr Bashtāk (1337-9) in Cairo.¹

In the eighteenth century the Turks introduced a new form of interior decoration, of which there is a fine example at South Kensington,² brought from Damascus and dated 1756-7 (no. 411-1880). There is another specimen (no. 504-1883) in the Bethnal Green Museum, also of the eighteenth century. This room is not only complete in itself in all respects, but it contains all its characteristic furniture and fittings, including vessels of metal and pottery, a lamp in filigree bronze with a delicately decorated ostrich egg used as an 'ovoid' (see p. 226) above it, a *diwān* with cushions, carpets, and matting, two kursis, coffee-cups in enamelled stands, a water-pipe with several bowls, and a book-stand inlaid with mother-of-pearl and tortoise-shell. The wall surfaces are divided into panels by shallow pilasters. The windows have diagonal bars, and above are small qamariyyahs with coarse glazing. The ceiling is divided into geometrical panels and richly decorated with coloured gesso, like the remainder of the woodwork. Round the room run continuous wooden shelves supported by a cornice of coarse stalactites in tiers. There are eight recesses containing shelves. Like the large double doors, these have segmental heads. But most interesting of all is the small *mihrāb*, with the usual flanking shafts and stalactites in the vault over, showing how little this feature varied from the Saracen tradition even at this late date.

The lighter forms of Saracenic woodwork, or, as we generally term it nowadays, 'joinery', may fortunately be studied to great advantage by Englishmen in the South Kensington Museum, where the magnificent collection formed by Professor Lane-Poole is housed at the end of the West Hall. But, in order to understand its unique characteristics, one must know something of the climate, social habits, and religion of the country that brought them into being. Thus *mushrabiyyah*, or wooden lattice-work, one of the features of Cairo architecture that most impresses a visitor, was partly the outcome of climatic conditions and partly to afford light, ventilation, and a view of the outside world to the secluded inhabitants of the *harīm*. But, as I have already explained at some length (on pp. 148-9), its primary function was to cool the porous jars in which drinking-water was kept for the use of the household. The theory of the derivation of the word given by Ali Bey Bahgat,³ of the Arab Museum in Cairo, may be

¹ Illustrated in Devonshire, *Rambles in Cairo*; and in Migeon, *L'Art musulman: les arts plastiques*, fig. 95.

² Now (1921) stored and thus not visible.

³ Quoted in Herz Bey, *Descriptive Catalogue of the Arab Museum, Cairo* (1907), p. 69.

compared with that previously mentioned on p. 148. At all events there is no doubt as to its application in architecture.

The distinctive features of Cairo domestic *mushrabiyyah*, as compared with other forms of lattice found elsewhere in that city, in the Delta towns, and in Syria, are the use of small pieces of turned wood to form the lattice, the extraordinary ingenuity with which these tiny units were varied in form and arrangement, and the closeness of their spacing in order to prevent a clear view into the rooms of the house. It has been stated that this unique craft found its origin in the earlier work of the Copts, but though several Coptic churches in Egypt do possess screens composed of similar lattice, it has not been proved that they are as old as the buildings in which they stand. According to Herz,¹ the earliest authenticated examples occur in the Ayyūbid cenotaphs (thirteenth century) in the mosque of Imām ash-Shāfi'i, in the railing surrounding the tomb of Sultan Qalāwūn (c. 1285), and in the balustrade of Lājīn's *mimbar* (c. 1296) in the mosque of Ibn Ṭūlūn. In the third of these the first use of the grille-pattern proper is seen; previously dwarf balusters were used in rows, not in squares. In the great majority of cases the framework is formed of miniature turned bobbins, with a square knob at the intersection; but the latter is usually rounded at all its corners, and frequently assumes a spherical or oval form. The bobbins themselves are so varied in design, though so small, that no general rule or description can be given. Sometimes the size of the squares is increased, and diagonal bobbins are inserted with a small knob at their intersection. Thus each larger knob has the ends of four, five, or six bobbins let into it. A study of the numerous specimens at South Kensington, and a reference to the illustrations in this book (Figs. 204, 205, 207), or to the more elaborate series in the works of Lane-Poole, Bourgoin, and Prisse d'Avennes, will show the fertility of invention of the Arab craftsman and his incurable love of geometrical patterns, for many of these examples date from the eighteenth century, long after the Turkish conquest had stifled Saracenic art in many of its branches. In theory the centre-lines of each square of the grille are arranged so that the human eyes may conveniently look through them, and in domestic *mushrabiyyah* proper the spacing between centres varies from $1\frac{1}{4}$ in. to $1\frac{3}{4}$ in. But sometimes the mesh is much smaller, and there is one amazing miniature example at South Kensington (no. 1071-69), where nine squares run to a square inch. *Mushrabiyyah* was frequently represented in positions where its original purpose failed to justify it, as in Qur'ān-desks, pulpit-stairs, and so on, simply as an additional means of decoration and elaboration, but in such cases the tiny bobbins were not always turned separately but were cut out of the solid.

¹ Herz Bey, *op. cit.*, p. 70.

Sometimes an inscription was worked in it, as in the miniature example mentioned above. Another interesting variant was the representation of various subjects—a lamp, an animal, an heraldic emblem—in the lattice by filling up certain of the squares with diagonal bobbins, thus producing a semi-opaque effect. Not even satisfied with such complicated and intricate craftsmanship, the Arab workmen finally carved, and even inlaid with ivory of wondrous delicacy, the small knobs of the *mushrabiyyah*. Specimens of this too (1073 and 1074-69) are exhibited at South Kensington, where one may study, perhaps as well as in Cairo itself, the design of some of the magnificent bay-windows formed of this intricate lattice-work. Usually these windows had a wooden cove beneath them, and a fretted eaves or 'brattishing' above them, and in some cases there is a subsidiary projecting niche, or miniature bay, sometimes called a *roshan*, to hold the water-jar for which *mushrabiyyah* was first designed. It is interesting to note that all these fine examples in London are of the eighteenth century.

This was not, however, the only form of lattice used in Cairo. The windows of the mosques were usually filled with a pattern of much larger squares, such as the example no. 1489-71 at South Kensington, where a 5-inch 'mesh' is found. And in the towns of the Delta a light lattice (*shīsh*) was formed of thin strips of fretted wood, often resulting in very attractive designs. Screens of *mushrabiyyah* work were sometimes used to separate the sanctuary of the mosque from the rest of the mosque, the finest instance in Cairo being found at the mosque of Alṭunbughā al-Māridānī (1339-40). In coarse work of the Turkish period the lattices were sometimes coloured, usually red or green.

Though the Arab love of elaborate and minute geometrical decoration and the Muslim desire for seclusion in the upper rooms of dwelling-houses both influenced the construction of the lattice-windows that the climate made essential, it is probable that the heat of the sun also accounted for the small size of the units used in construction. Similarly with panelling, though we again find complex patterns of interlacing polygons, the chief reason for the small scale of wood panelling in Saracenic architecture is partly, if not chiefly, due to the effect of the sun, which causes all exposed woodwork to shrink however well it may be seasoned. The object of the craftsman was thus to reduce all parts of the framing to the smallest dimensions. Thus in one panelled door (no. 189-81) at South Kensington the panels themselves—though twice bevelled—are only $\frac{3}{4}$ in. wide and in no case more than $2\frac{3}{4}$ in. long. This is, of course, an extreme case, but in all Saracenic panelling both framing and panels are made far smaller than is customary in northern countries. Curiously enough, the simplest panelled doors date from the later Turkish periods. Fig. 206 shows a fine example from

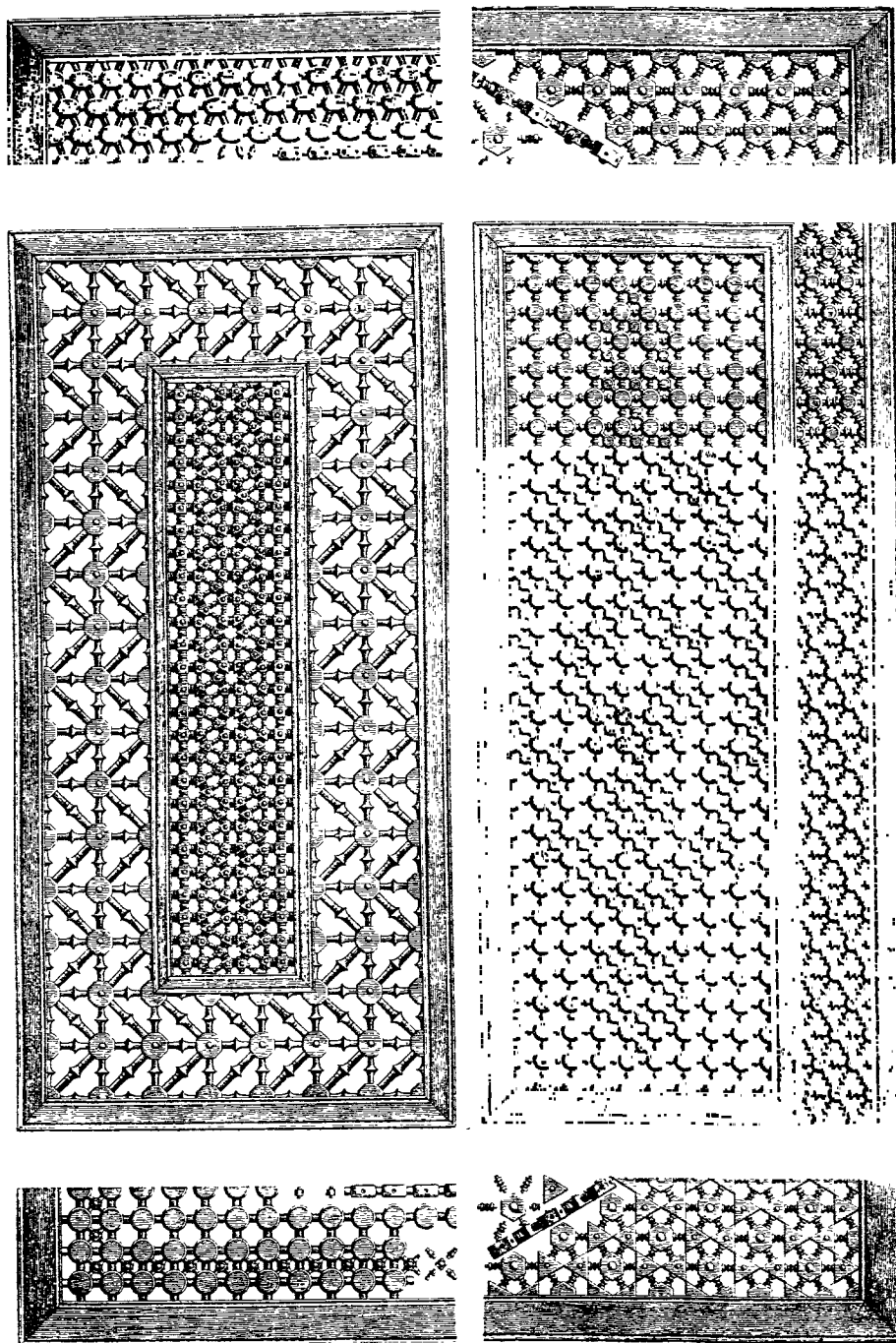


FIG. 204. CAIRO : EXAMPLES OF MUSHRABIYYAH

From Prisse d'Avennes.

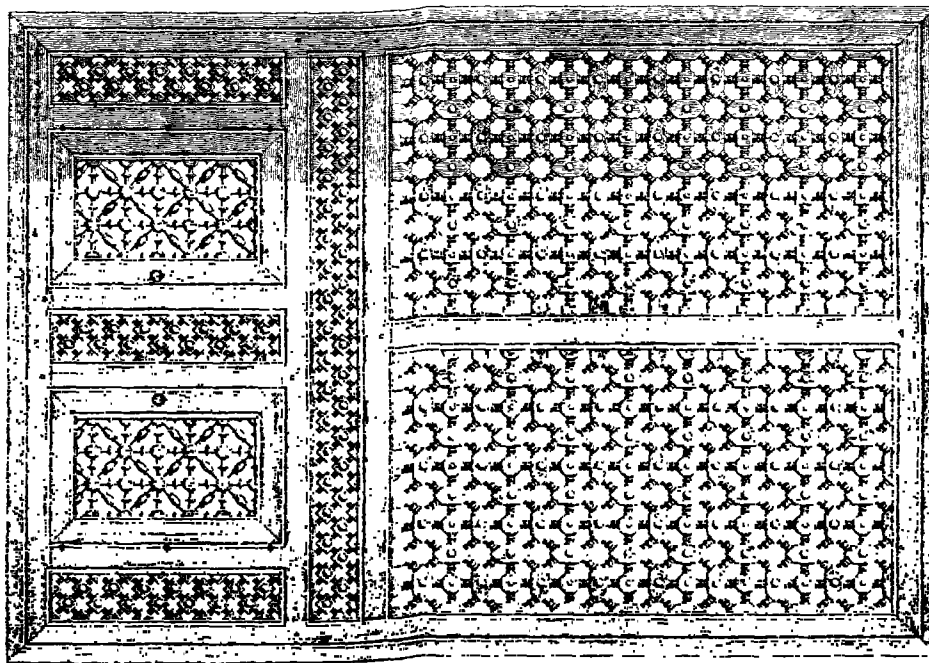
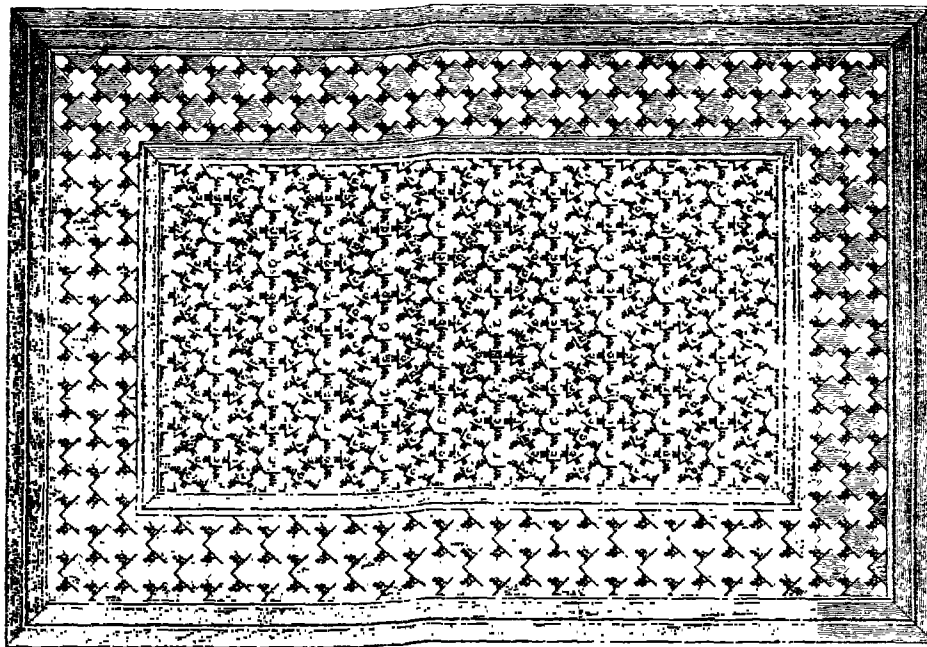


FIG. 205. CAIRO : EXAMPLES OF MUSHRABIYYAH
From Prisse d'Avennes.

the Khān Asad Pāshā at Damascus, and a very similar specimen is exhibited on the south wall of the West Hall at South Kensington. The subsidiary styles and rails of the latter, though delicately moulded, are only 1 in. wide, and the small panels are bevelled all round. The main framing is $1\frac{1}{4}$ in. thick with $\frac{1}{2}$ in. tenons, the styles and rails 3 in. wide, except the bottom rail which is 6 in. wide. Wedges are

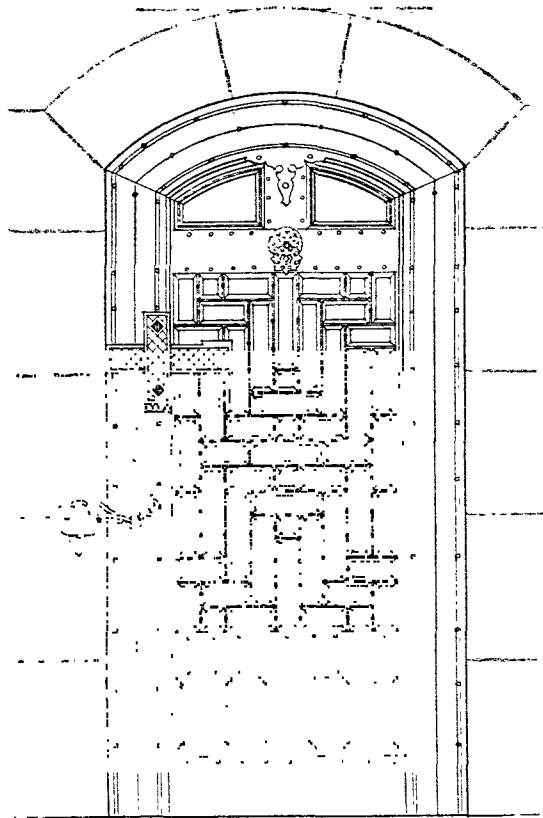


FIG. 206. DAMASCUS: KHĀN ASAD PĀSHĀ
DOOR. *M.S.B. del.*

used with the tenons, and small wooden pins, about $\frac{1}{4}$ in. in diameter, secure the main portions of the framing. Only one other example at South Kensington is of this comparatively simple rectangular design, the remainder having diagonal or interlacing or star patterns. The doors and cupboard-fronts of dwelling-houses were usually treated in this way, and most of the examples remaining are of the seventeenth century or later, but the doors of the mosques generally had carved or inlaid panels of a most elaborate type.

The earliest specimens of carved door-panels in Egypt were found in the mosque of Ibn Ṭūlūn and are now in the Arab Museum at Cairo. The sculptured ornaments are bold and large. The Fāṭimid examples from the end of the tenth century are more delicately carved, and are decorated with foliage in spirals. Both these and the Ṭūlūnid

fragments have a certain affinity, and suggest a common origin in the very similar carving of the Coptic craftsmen. The eleventh, twelfth, and thirteenth centuries showed a steady advance in wood-carving which became more refined and flowing in character. A beautiful early thirteenth-century example from a cenotaph near Cairo is described later in this chapter (p. 218). But perhaps wood-carving reached its highest point at the end of the thirteenth and beginning of the following centuries, under the reigns of Qalāwūn and an-Nāṣir. Natural forms were freely used, notably in the famous panels of hunting-scenes from the Māristān of Qalāwūn, which Lane-Poole attributes to a Persian origin, though he allows for the considerable influence exercised on this branch of



FIG. 207. CAIRO: OLD HOUSES WITH MUSHIRABIYYAH

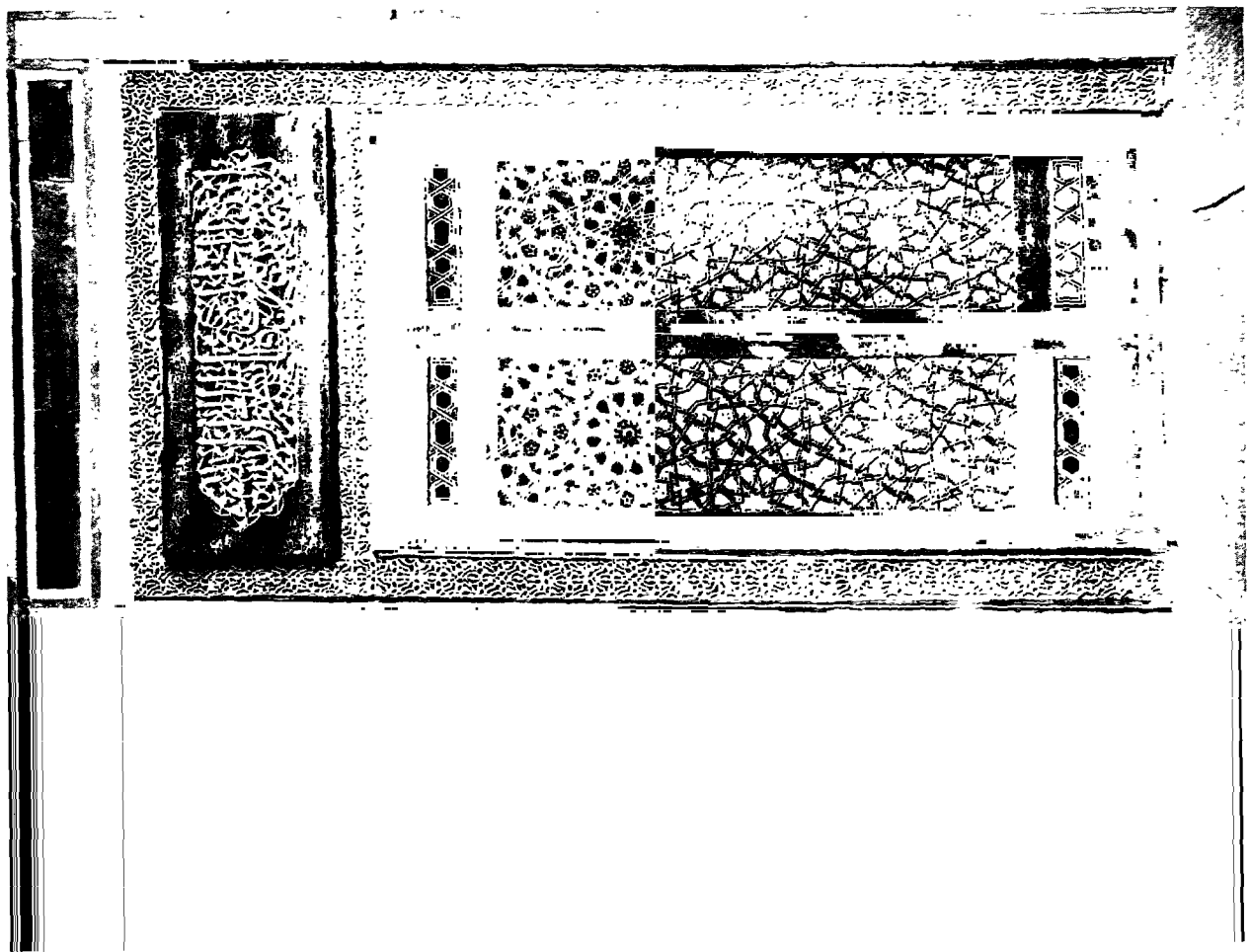


FIG. 208. INLAID DOOR from tomb of Mu'ayyad
Cairo : Arab Museum

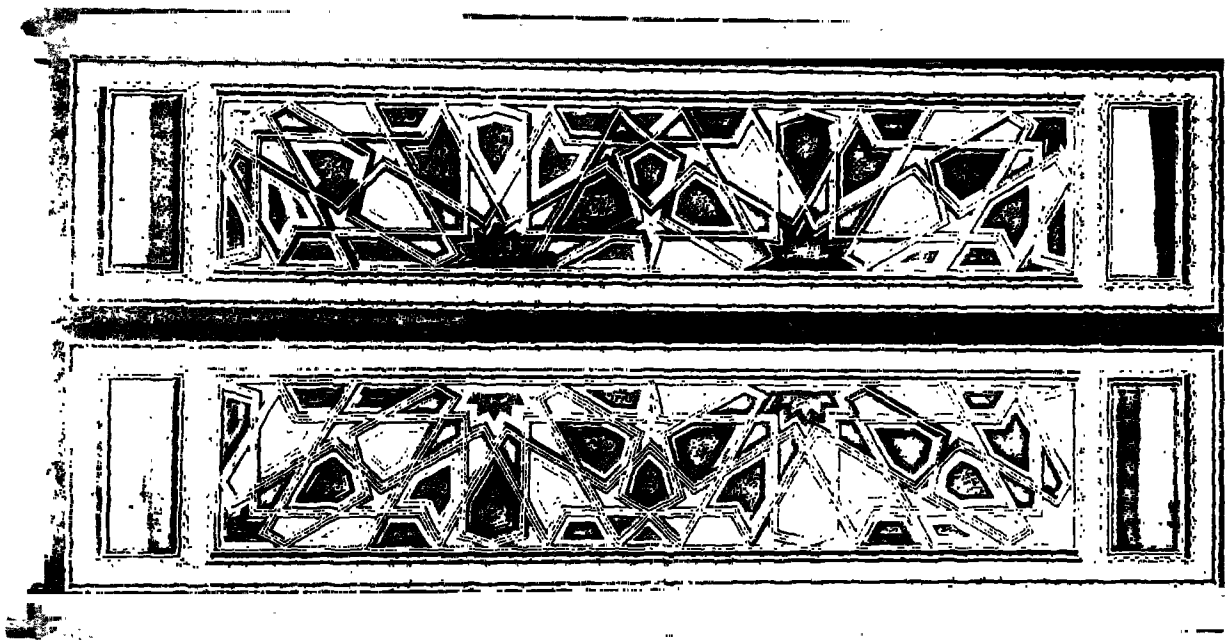


FIG. 209. INLAID DOOR from tomb of the Mother of Sha'bān
Cairo : Arab Museum

art by the Copts. South Kensington possesses a small portion of a frieze (no. W. 88-1911) of this period, but six interesting panels (no. 785-1896) in the same museum which are marked ' ? 13th century ' closely resemble a beautiful panel in the Arab Museum at Cairo which Herz¹ attributes to a much earlier Coptic craftsman.

The use of inlay seems to have commenced very early in the history of Arab art and may well have been introduced by Coptic workmen, as suggested by M. Saladin, though the date of the beautiful inlaid screens in the Coptic churches of Old Cairo is still quite uncertain. But from the early part of the thirteenth century onwards inlay became increasingly popular, and in the period of Qāyt-Bāy was applied to the doors, pulpit, *kursī*, and almost every portion of a mosque (except the ceiling) that was constructed of wood. The use of ivory, known to Arab craftsmen as early as the eighth century, became general in the fifteenth century. It was easily obtainable in Egypt, and was worked with great skill. Other materials used were ebony, tin, redwood, logwood, and Indian teak, while after the Turkish conquest bone, tortoise-shell, and mother-of-pearl were added. Inlaid panelling is usually in star-patterns or other elaborate designs, the framework consisting of narrow strips of wood bordered with fillets of ebony and ivory. The small polygonal panels between the strips are of variegated woods minutely carved. The South Kensington Museum contains several examples, including nos. 890-1884, 891-1884, and 1080-69, dating from the thirteenth to the fifteenth centuries. Green enamel, or ivory, coloured green, was another material used for inlaying purposes (Figs. 208, 209, 214, 215, and 216).

The rich metal-work with which the finest of the mosque-doors are decorated as well as the metal knockers used, is discussed in the next chapter, but a wooden lock (*dabbah*) is frequently found in dwelling-houses, of a type already described (see p. 149). A more ornamental form is found in the example illustrated (Fig. 206) from the Khān Asad Pāshā at Damascus, where mother-of-pearl is used as an inlay. Damascus still manufactures many wooden articles, including sandals or clogs, in which mother-of-pearl is applied in the same way.

Nearly all the accessories of the mosque were made chiefly or wholly of wood, including the *mimbar* or pulpit, the *kursī* or Qur'ān-desk, the *dikkah* or tribune, the screens surrounding the founder's tomb, and even occasionally the *mihrāb* itself. Of these the most important is the *mimbar*. The ritual connected with this pulpit has already been outlined in Chapter II, but a slight addition to that brief account may be made by quoting Professor Lane-Poole's explanation²

¹ Herz, *op. cit.*, p. 110, and fig. 26.

² S. Lane-Poole, *Saracenic Art*, p. 128.

of the reason why the Imām of the mosque preaches from the top step but one :

‘Muḥammad the Prophet always preached from the top step, and the Khalifs, his successors, modestly descended each a step lower than the preceding, in order to reserve the post of honour to the most worthy. But when two or three steps had thus been descended, it was discovered that the process if continued long enough would land the preacher in the bowels of the earth, and it was accordingly decided to reserve the top step for Muḥammad himself, and to preach from the next lower on all future occasions.’

In the last chapter mention was made of the fine stone *mimbar* in the mosque of Barqūq *extra muros*, and there are also fine examples in marble in the madrasah of Sultan Ḥasan and in the nearly contemporary mosque of Shaykhū, all in Cairo. But, with these and a few similar exceptions, the *mimbar* was made of wood, usually elaborately carved and inlaid to emphasize its importance in Muslim worship. It is generally agreed that the oldest remaining example is found in the great mosque of Qayrawān in Tunis. The date is attributed to the end of the tenth century.¹ The pulpit is made of plane-tree wood, brought from Baghdād, and its openwork carving is distinctly Byzantine in character. It consists of a simple flight of steps, without the striking cupola at the top or the portal at the bottom found in later examples. The spandril-framing is formed of rectangular openwork panels with carved styles and rails. The balustrade consists of vertical carved strips at regular and close intervals (thus resembling balusters), with raking pieces representing handrail and plinth. Between these vertical strips or balusters are openwork panels. It is believed that this was the work of local craftsmen.

A pulpit of the twelfth century stands in the mosque of al-Aqṣà at Jerusalem.² It was made to the order of Nūr ad-Dīn in 1168 for the great mosque of Aleppo, and was afterwards transported by Saladin to its present position. It shows a considerable advance on the workmanship of the Qayrawān example, and is inlaid with ivory and mother-of-pearl. It possesses the cupola, with the typical bulb, and the portal decorated with stalactites, that became usual in later times.

A fine wooden *mimbar* was installed by Sultan Lājīn as part of his restoration in 1296 of the mosque of Ibn Ṭūlūn in Cairo. According to Herz Bey,³ the framework of this pulpit now existing is original, but some of the missing panels are now in the Arab Museum at Cairo

¹ H. Saladin, *La mosquée de Sidi Okba à Kairouan* (Paris, 1899).

² Illustrated in H. Saladin, *L'Art musul-*

man : Architecture, fig. 28.

³ Herz Bey, *op. cit.*, p. 70.



FIG 210. CARVED PANEL
Cairo : Arab Museum

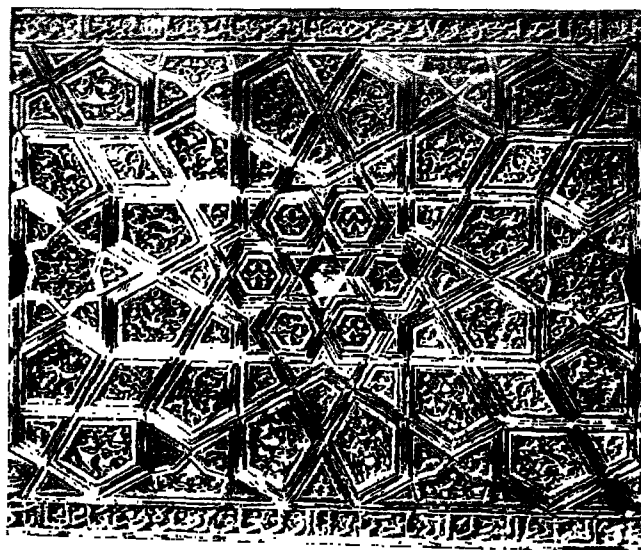


FIG 211. CARVED CEILING
Cairo : Arab Museum



FIG 212. CARVED PANEL
Cairo : Arab Museum



FIG 213. CARVED PANEL
Cairo : Arab Museum

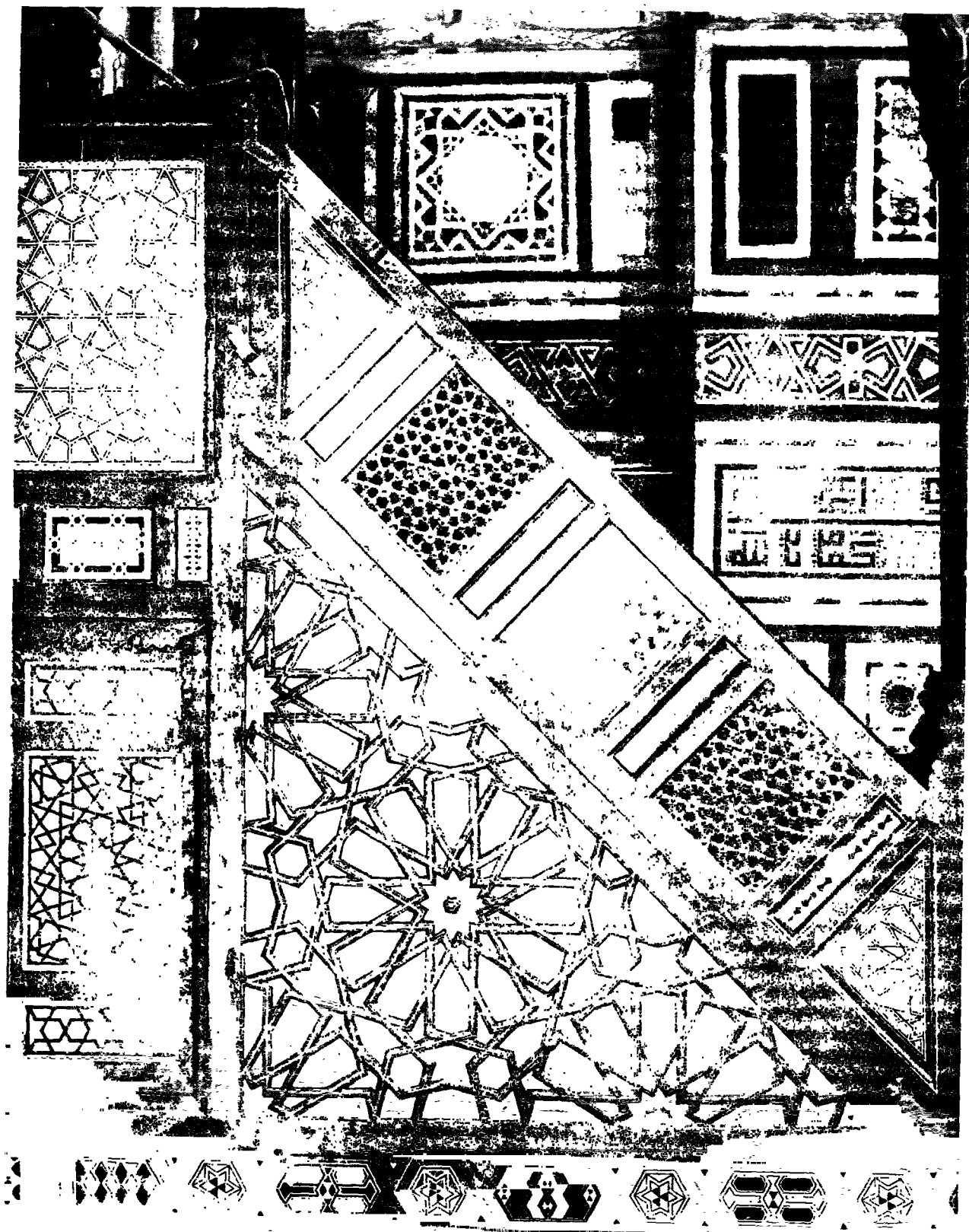


FIG. 214. CAIRO: MOSQUE OF AL-BURDAYNĪ
Detail of side of an inlaid pulpit (*Mimbar*)

and others are in the South Kensington Museum (no. 891-1884). It is thus possible for students in London to see for themselves how high a point of excellence had now been reached by the wood-carvers of Cairo. The design of the spandril-framing forms a star-pattern, the strips between the panels being about $1\frac{3}{4}$ in. wide. An adjoining example (890-1884) at South Kensington bears the name and titles of Sultan Hasan, and may be assumed to be of the middle fourteenth century. Other panels are preserved in the same museum from the pulpit in the mosque of al-Māridānī (1339-40) at Cairo.

The magnificent pulpits of the fifteenth and early sixteenth centuries in Cairo are very numerous, and, in spite of their elaborate decoration, all have a certain similarity of design. Of these South Kensington possesses one remarkable and very perfect example (no. 1050-1869) from the mosque of al-Mu'ayyad at Cairo, but made, according to the inscription, during the reign of Qāyt-Bāy (1468-96). The panels in this example are of delicately-carved ivory, but there is a mechanical character in the carving that renders it inferior to some of the earlier specimens. Traces of colouring are to be seen in other parts of the woodwork. But taken as a whole this *mimbar* may be regarded as typical of the work of the later Mamelukes in Cairo, and may well be compared with Figs. 114, 152, in this book. The gilt 'bulb' with its finial and crescent, and also the stalactite cornices, are very characteristic of the period.

After the Turkish conquest the *mimbar*, like all other objects of craftsmanship, showed a deterioration. The carving was clumsy, and crude colours were used in decoration. But the little seventeenth-century mosque of al-Burdaynī in Cairo has a beautiful pulpit maintaining the mameluke tradition.

The *dikkah* or tribune is occasionally made in wood, more usually in stone or marble, and calls for no special mention in this chapter. But the *kursī* usually displays the skill of the Arab craftsman, especially in inlaying, at its best. This is a lectern, or V-shaped desk, on which the large copies of the Qur'ān are placed for reading. There are no examples at South Kensington, but several in Cairo, in the Arab Museum, and in some of the mosques, e. g. of Barqūq *intra muros* (see Fig. 215) and of Jānim al-Bahlawān.¹

The Arab museum in Cairo contains three very interesting wooden mihrābs of early date, from the mosques of al-Azhar, of Nafisah, and of Sayyidah Ruqayyah. All of these are works of the first half of the twelfth century, and they have formed the subject of a special memoir.²

¹ M. Herz Bey, *La mosquée de l'Emir Ganem al-Bahlaouan* (Cairo, 1908), figs. 10, 11, and plate ix. ² P. Ravaisse, *Sur trois mihrabs en bois sculpté*. (See Bibliography for Chapter IV.)

The delicate carving in the panels on the back of the last-named closely resembles that of some panels at South Kensington already mentioned (no. 785-1896). The first is made of lotus-wood, the second of Turkish oak, the last of Turkish oak with panels of teak, olive-wood, &c. All three are portable and of small size, of a type usually found in private mosques. The delicacy and refinement of their carving is in striking contrast with the clumsy and even ugly workmanship of the eighteenth century *mīhrāb* at South Kensington (no. 143-1881) from the mosque of 'Abdallāh Pāshā at Cairo.

It is a remarkable fact that the gorgeous tomb-mosques of the mameluke sultans and their courtiers shelter modest cenotaphs of almost austere simplicity. The marble sarcophagus under the beautiful dome is without any carved ornament save a moulding or a decorative inscription. Nor is this admirable self-effacement on the part of the pious founder less apparent in the wooden screens that surround the tomb-chamber. In the mausoleum of Sulṭān Qalāwūn these are of a primitive *mushrabiyyah* already mentioned. But the mosque of Barqūq *extra muros* contains a screen of surpassing excellence and unusual form (Fig. 218) in which the geometrical ornament is pierced in the woodwork. This is undoubtedly one of the masterpieces of Arab art.

The graves of the shaykhs, or holy men of Islam, found in cemeteries out-of-doors in all Muslim countries, were often ornamented with carved friezes, and one of these, bearing an inscription with the date A. D. 1216, has provided the South Kensington Museum with its finest specimen of Saracenic sculpture in wood (no. 981-1883, see Fig. 224). One side of this frieze, with its tenons showing, is in London, the remaining three in Cairo. The descendants of the *amīr* whose grave was thus ornamented are now living in Egypt! ¹ It is interesting to note that the deeply-cut carving of the ornament has had its edges softened by the action of the desert sand during many centuries.

Apart from the furniture of the mosque, there are many interesting woodwork details to be found in the later houses of Cairo and the Delta towns, also in Damascus. Reference has already been made to these in Chapter IX, but a study of the two eighteenth-century wall-cupboards (no. 899-1884) gives the typical character of such work in Cairo, and should be compared with the much less restrained and Turkish style of the panelled room at Damascus, now exhibited at the Bethnal Green Museum. The early nineteenth-century chemist's and barber's shop-front from Cairo, with woodwork painted red and green, shows one of the most picturesque features of the narrower and less sophisticated streets of that wonderful city.

Lastly, one may mention some minor articles of domestic use,

¹ Herz, *op. cit.*, p. 99. [The three panels are in the Arab Museum.]

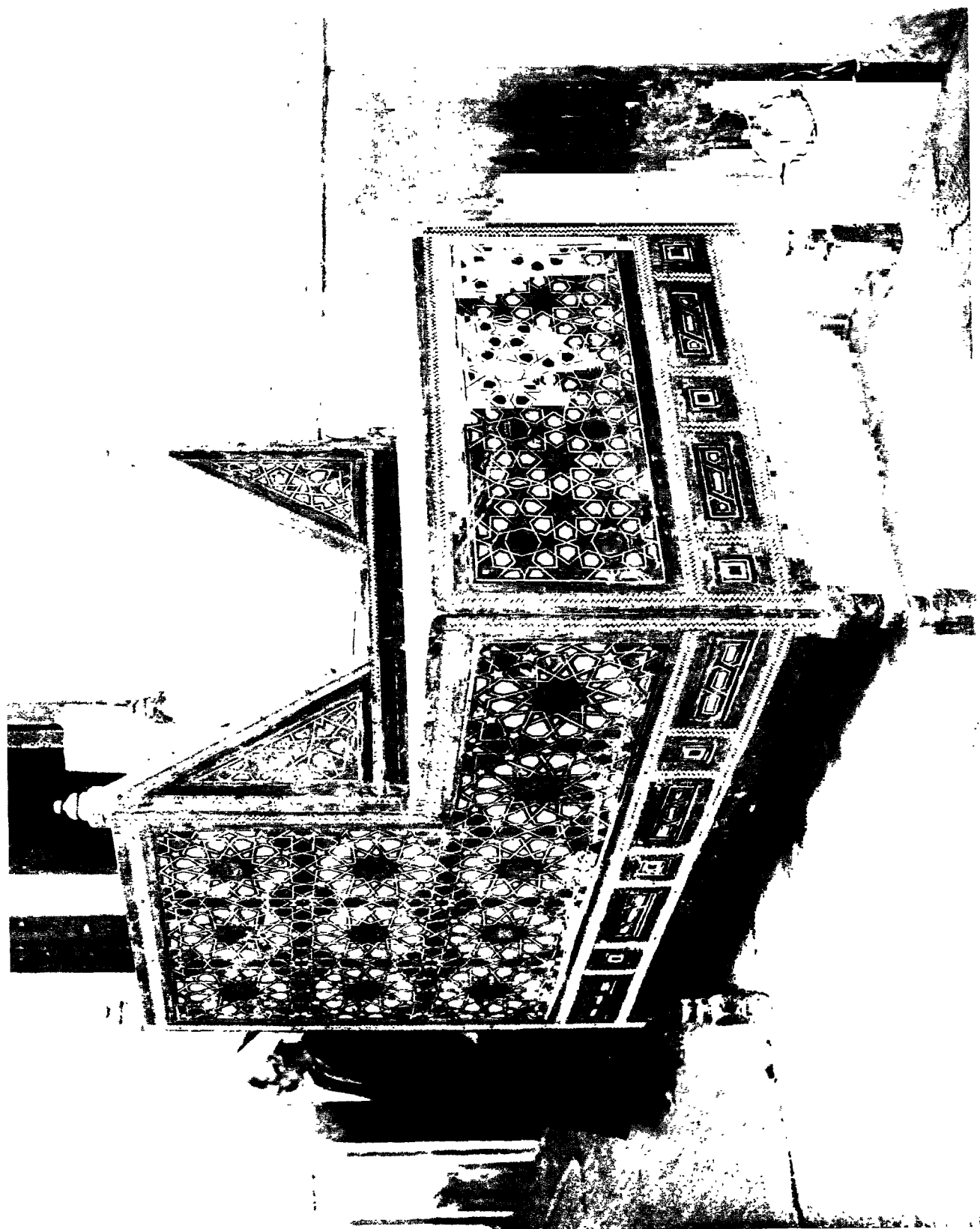


FIG. 215. INLAID KURSI

Cairo : Madrasah of Barqūq (*intra muros*)

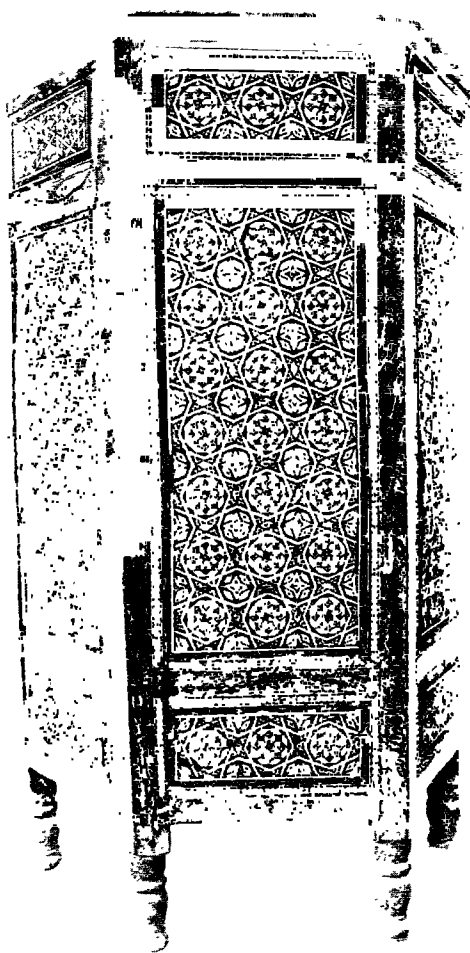


FIG. 216 KURSĪ OF INLAID WOOD
Cairo - Arab Museum

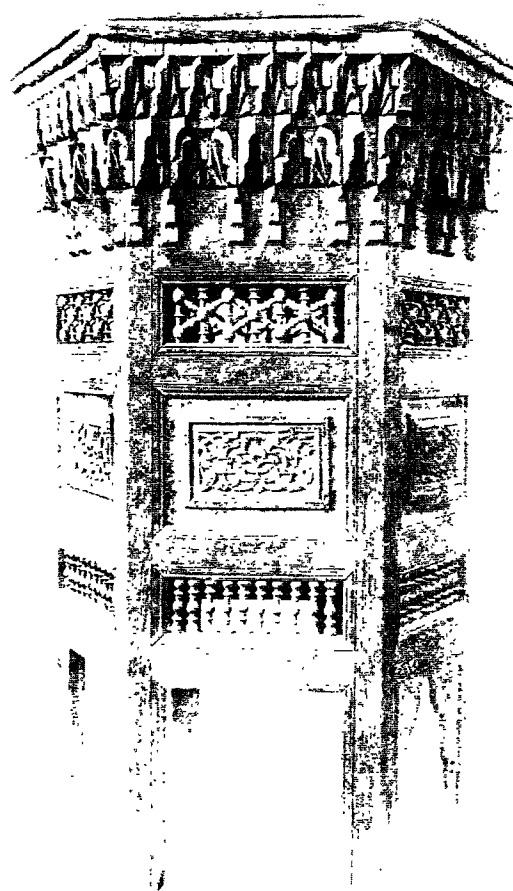


FIG. 217 KURSĪ OF CARVED WOOD
Cairo - Arab Museum

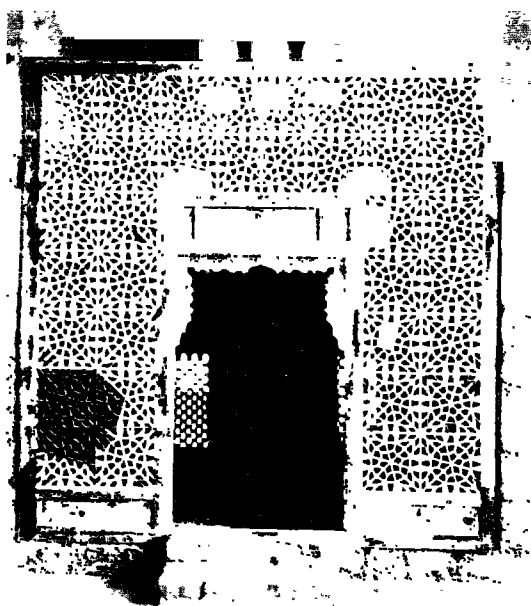
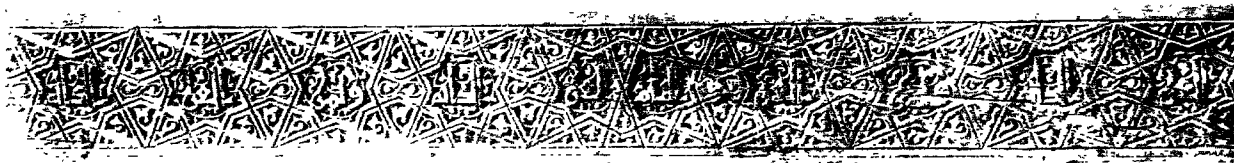


FIG. 218 PIERCED WOOD SCREEN
Cairo - Mausoleum of Burquq (*al-Burquq*)



FIG. 219 WOODEN CEILING
with carved "stalactites"
Cairo - Mosque of Al-Ayn



FIGS. 220-23. EXAMPLES OF CARVED WOOD FRIEZES (twelfth and thirteenth centuries)
 Cairo : Arab Museum

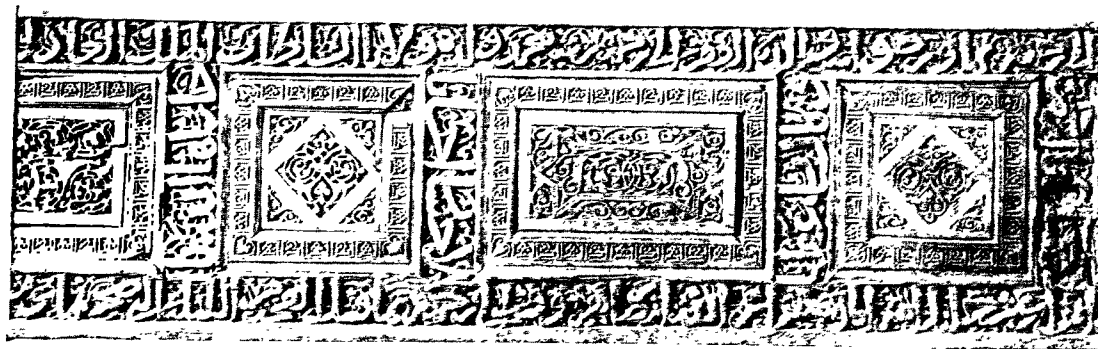


FIG. 224. SIDE OF A CARVED WOOD CENOTAPH (thirteenth century)
 Cairo : Arab Museum

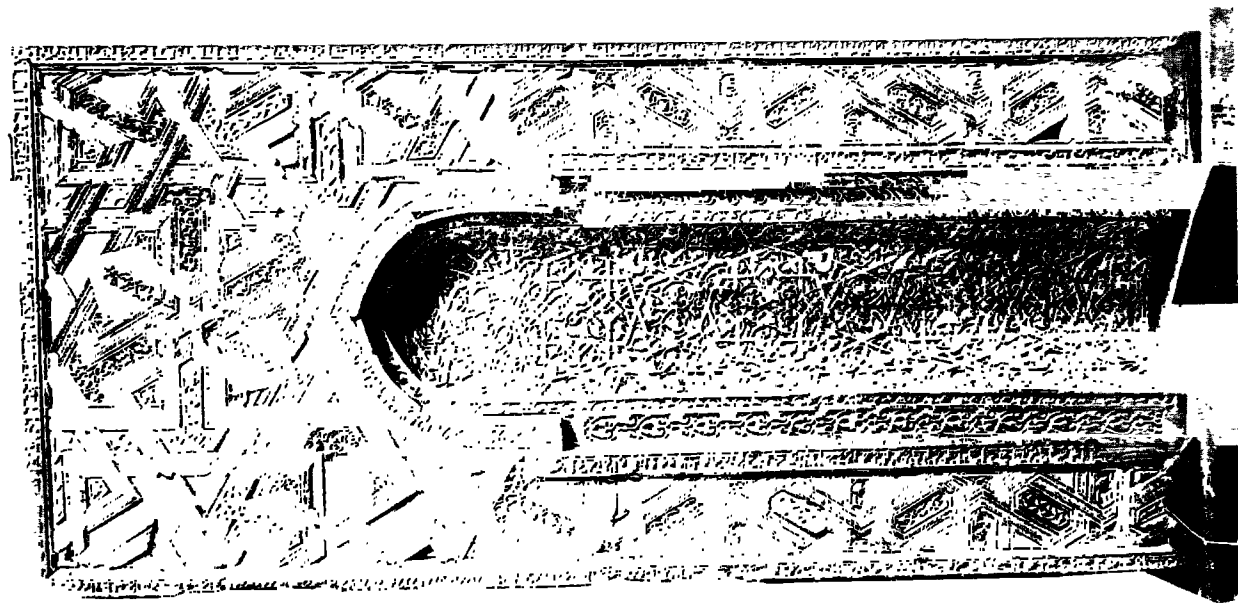


FIG. 225. WOODEN MIHRAB (XI Cent.)
Cairo : Arab Museum

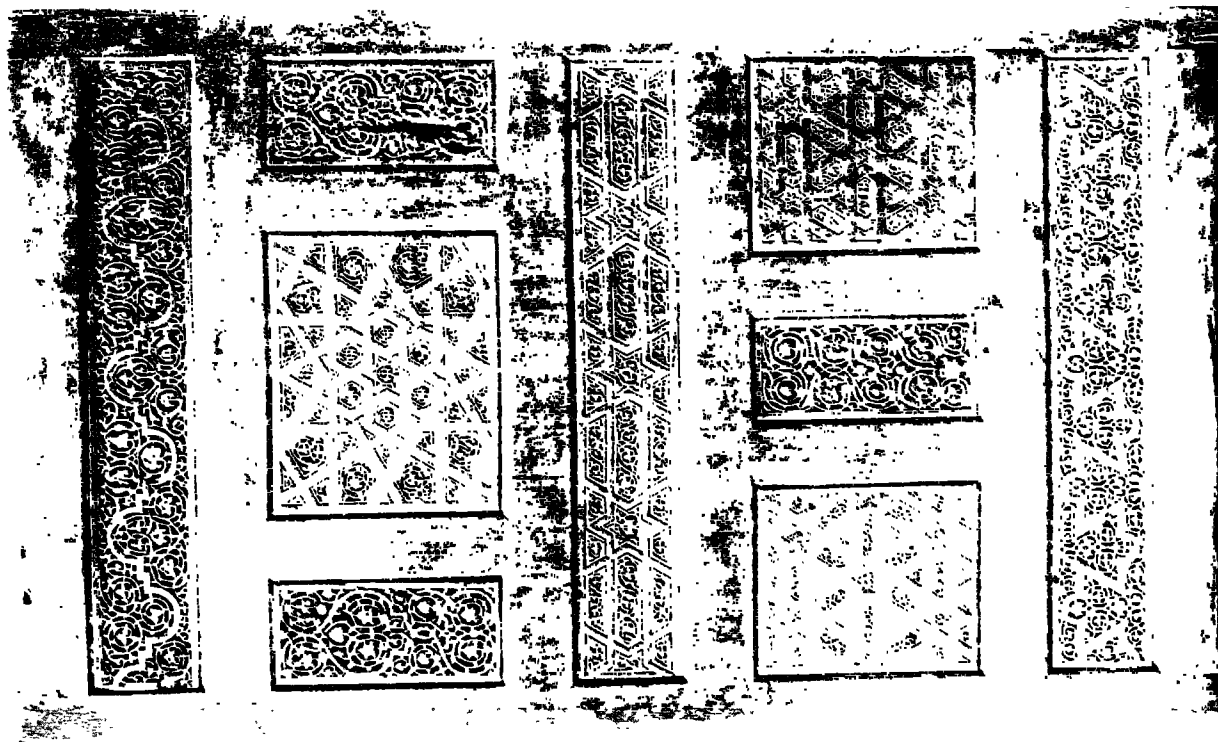


FIG. 226. BACK OF WOODEN MIHRAB
Cairo : Arab Museum

the carved coffer-fronts from Damascus, of the seventeenth century, preserved at South Kensington (nos. 394, 396, 398-1901) and the octagonal inlaid tables used in Arab houses centuries ago, but still made and used in Syria and Palestine. Curiously enough, these little tables, which served as stands for food in houses, and occasionally as lamp-stands in mosques, bore the same name (*kursi*) as the Qur'ān desks already described. Many of them are of varied and exquisite design, bearing witness to the high level of decorative accessories of Arab art, for this was almost the only article of furniture used in the older houses of Cairo and Damascus. Examples of late date are to be seen at the South Kensington (no. 904-1884) and Bethnal Green Museums. The latter also contains a small inlaid book-rest from Damascus, tortoise-shell and mother-of-pearl being used in the inlay.

BIBLIOGRAPHICAL NOTE FOR CHAPTER XII

See the chapters on woodwork in the general works of Bourgoïn, Gayet, Herz, Lane-Poole, Migeon, and Prisse d'Avennes cited on p. 183.

XIII

CRAFTSMANSHIP : METALWORK, GLASS, AND CERAMICS

THOUGH the scope of the present volume does not include all the forms of decorative art in which the craftsmen of Cairo and Damascus excelled, it must of necessity comprise those branches of metalwork, glass, and ceramics directly connected with the furnishing and embellishment of buildings. Thus one must exclude carpets, illuminated manuscripts, jewellery, armour, coins, woven fabrics, vessels of glass and earthenware, and such metal objects as cannot be regarded as definitely 'architectural'. But the architect is certainly concerned with the inlaid or damascened metalwork used for the facing of doors in the Mameluke mosques; with the iron grilles used in mosque-windows; with metal lamps and lanterns; with encaustic wall-tiles; with stained-glass windows; and lastly, with the wonderful lamps of enamelled glass that hung from the ceilings of the mosques of Cairo in the fourteenth century.

Copper, bronze, and brass were used in mosques of the thirteenth century, and much more freely in the century following, but for earlier examples we are largely dependent on written descriptions by contemporary historians and travellers. There are, of course, a few exceptions, dating from the Fātimid period, such as the door-plates mentioned on p. 222 and the curious bronze figures of animals—for the most part mythical and possibly of Chinese origin—described in Chapter X and probably made in Egypt. In the 'Dome of the Rock' at Jerusalem are some fine plates of *repoussé* bronze of markedly Byzantine type, illustrated by De Vogüé¹ and attributed by him to the seventh century.

Muqaddasī, writing at the end of the tenth century, describes the great entrance-door of the mosque of Al-Aqṣà at Jerusalem. It was covered with gilded copper and was very heavy. Nāṣir-i-Khusrau describes the same door, in his account of the various Muslim buildings that he visited between 1035 and 1042, as follows :

'Among its doors is to be remarked one in copper, so rich and beautiful as to confound the imagination. The copper shines so brightly that it might be taken for gold; *it is covered with inlaid threads of silver*, and on it may be read the name of the Caliph

¹ M. de Vogüé, *Le Temple de Jérusalem* (Paris, 1864), plate 22.

al-Ma'mūn. It is said that this door was sent from Baghdād by that prince.'

Two noteworthy points occur in this brief extract, viz. that the date of the manufacture of this door cannot have been later than the early part of the ninth century, and that at this very early date inlaying in silver, or 'damascening', as it is commonly called, was practised in Baghdād.

At Tyre Nāṣir-i-Khusrau remarks on the gold and silver candlesticks, at Jerusalem on the doors of the *Haram* covered with arabesques, and at Cairo on the sultan's throne made of fine gold and silver, decorated with hunting-scenes and inscriptions, beautifully chased. Half a century later we have a contemporary inventory of the treasury of the Fāṭimid rulers of Egypt, in which are enumerated great quantities of vessels of gold, silver, and precious stones, indicating rapid progress in the use of metals in craftsmanship but not bearing very closely on architecture.

But in spite of this scarcity of early examples in Egypt and Syria, it is known that in the neighbouring countries of Mesopotamia and Persia there was a flourishing industry in bronze and copper long before it appeared in Egypt. The chief centres of the craft were the cities of Mosul and Diyārbakr, both on the River Tigris. Copper was obtained from large mines in a hill near the present mining-centre of Maden Khapur. From the fact that so large a proportion of this metalwork was executed at Mosul, it has come to be known as 'Mosul-work', and exhibits of metal bowls, candlesticks, &c., will be found so described in the South Kensington Museum. Although damascening is a characteristic of Mosul work, it is probable that in early examples ornament was confined to engraving and *repoussé*, inlaying following later.

Numerous specimens of Mosul metalwork are preserved in the British and South Kensington museums in London, in the Arab Museum in Cairo, in Paris and other European capitals. They date from the thirteenth century and display a great range of design and of execution. The majority are decorated with hunting-scenes, characteristic of Persian art for centuries previously, and are delicately inlaid, while others are of simpler form with bold *repoussé* ornament. The material used is generally brass (occasionally bronze), inlaid with silver (and, in a few cases, with gold). A black bituminous composition is used to fill up spaces and to enhance the effect of the narrow lines of silver. The process of damascening has been described in great detail by Lane-Poole,¹ who also quotes descriptions by two French writers. He explains how the plates and lines of precious metal (known in

¹ S. Lane-Poole, *Saracenic Art* (1886), pp. 184-7.

Arabic as *kaft*) are secured to the ground of bronze or brass. In later work, and in the beautiful damascening practised by Saracenic craftsmen in Venice in the sixteenth century, a different method was used. When the plates were fixed, they were elaborately engraved, as much care being lavished on parts that were not seen as on the rest. Lane-Poole gives an example of this love of art ¹ for its own sake :

‘ Maḥmūd the Kurd, a Saracen artist of Venice, carried this principle of honest work so far, that when he made use of the stippling process to retain his silver plates in their places, he traced his stipples in a graceful scroll-pattern, although he knew that they would immediately be concealed by the silver they were designed to hold. If the silver had not accidentally been worn off, we should never have suspected the true artist’s spirit hidden beneath.’

The examples of the Mosul style preserved in the London museums bear dates between 1230 and 1270, but none of them are of architectural character, nor are there any lamps, door-plates or other mosque-fittings in the category christened by Lane-Poole ‘ Early Syrian ’ work and forming a transition between Mosul work and the craftsmanship of the early Mamelukes. The art of the Syrian school, in which the use of gold inlay was the predominant feature, was confined to small objects made during the first half of the twelfth century. An historical event influencing the progress of metalwork in Egypt and Syria was the fall of the Caliphate in 1258, encouraging the removal of craftsmen from Mesopotamia to Cairo, where Baybars inaugurated the line of the Turkish mameluke sultans in 1260.

From that time there are only comparatively few dated examples of architectural metalwork for some thirty years, after which follows a century during which this work was at its zenith. Although much of the early metalwork in Cairo was due to craftsmen from Mosul, it was adapted in design to suit Egyptian tastes, and the hunting-scenes beloved by the artists of Mesopotamia gave place to geometrical patterns and conventional foliage. The earliest known and dated examples of mediaeval metalwork applied to buildings in Egypt are the three pairs of bronze doors in the Arab Museum at Cairo (nos. 1, 2, and 3 in the Ninth Hall). The first pair is about 14 ft. high, was removed from the mosque of Ṭalā’ī‘ aṣ-Ṣāliḥ (1160), and is covered with sheet brass, to which are applied openwork plates arranged to form a pattern of eight-pointed stars. The reverse of the doors is also decorated and studded with large nails. The second pair is dated 1211, and closely resembles the previous pair. It came from the tomb-mosque of Imām

¹ S. Lane-Poole, *Saracenic Art* (1886), p. 188.

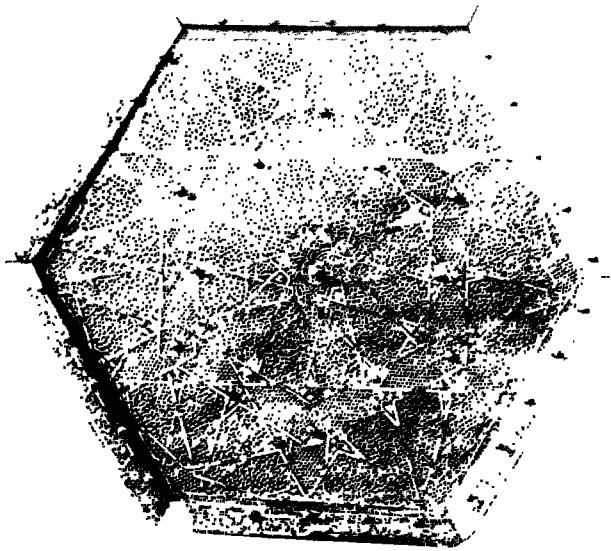


FIG. 227 TOP OF THE KURSĪ BELOW

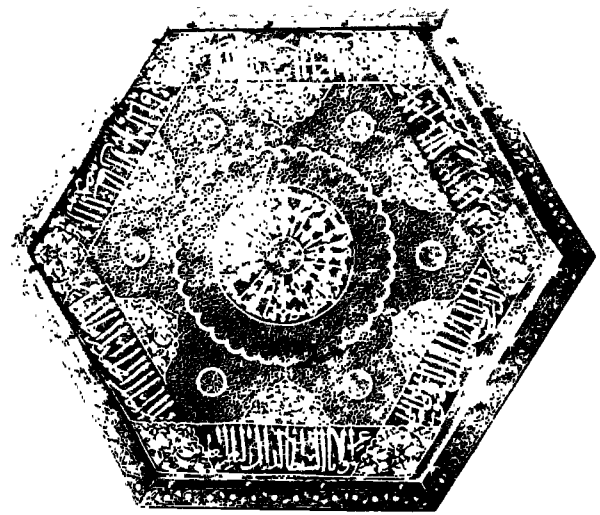


FIG. 228 TOP OF THE KURSĪ BELOW



FIG. 229 INLAID KURSĪ
Cairo: Arab Museum



FIG. 230 INLAID KURSĪ
Cairo: Arab Museum

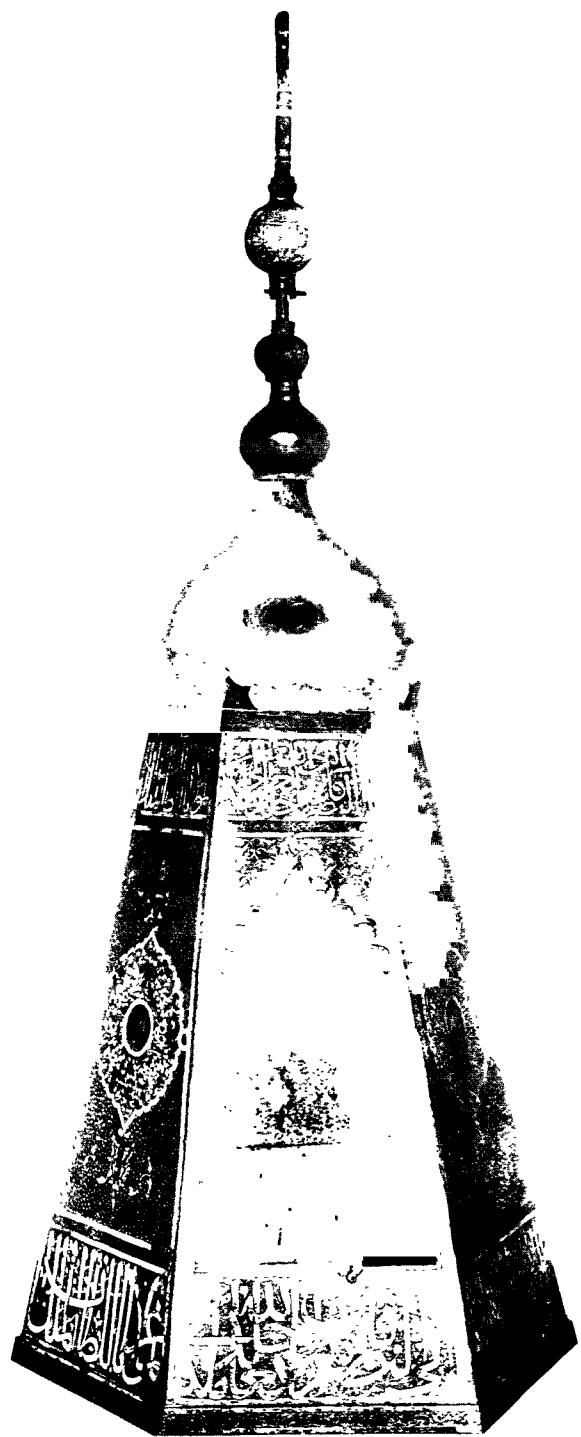


FIG. 231. DAMASCENED MOSQUE-LAMP
FROM CAIRO (PERIOD OF QAYT-BAY)
London · Victoria and Albert Museum

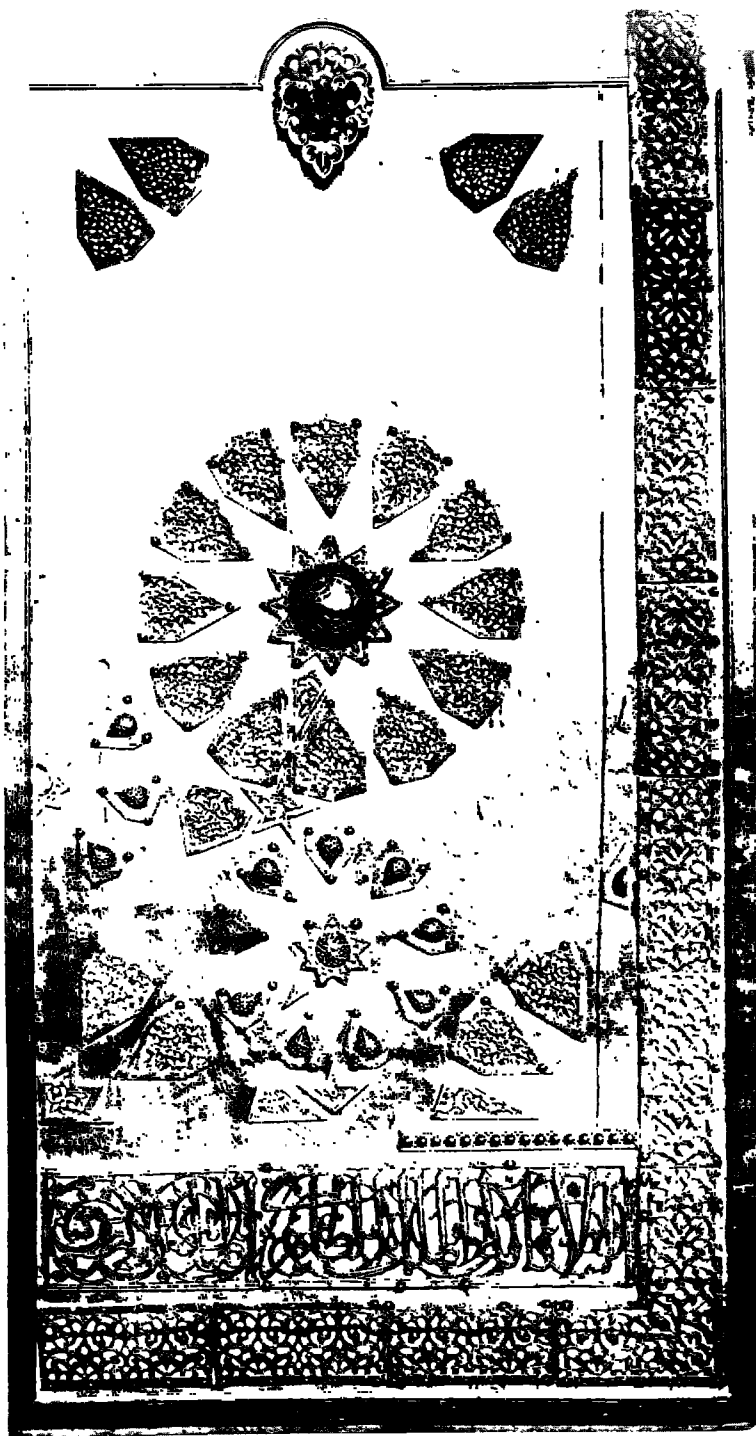


FIG. 232 METALWORK FROM DOORS OF MOSQUE
OF BAYBARS I. CAIRO
London · Victoria and Albert Museum

ash-Shāfi'ī. The third pair bears the date 1203, and is also decorated with brass plating, but animal forms are freely used in the ornamental panels. There is a similar example (Fig. 232) in the South Kensington Museum (nos. 909, 910, and 911-1884), but portions only of the metal-plating are preserved, and none of the door itself. These portions consist of

' a central boss, bearing the crest of Baybars, with 12 geometrically-shaped plaques arranged round it, each of which contains an arabesque-design in open filigree-work; a smaller boss surrounded by nine similar plaques; a knocker; and a border of open arabesque work; and a portion of an Arabic inscription also in open-work. Two other sets consist of a knocker, bosses, and geometrical plaques filled with arabesque designs in open work, arabesque borders, and a portion of a Qur'ān inscription. . . . All these pieces are *cast*, not cut, and are therefore identical each with its fellows in the same system, in contrast to the usual character of Cairene work, where we seldom find two patterns alike. The arabesques are, however, very free and flowing, and the appearance of the numerous plaques, fastened all over the door by ribbed studs, must have been highly effective.' ¹

The date of the mosque from which these doors were removed is given by Lane-Poole as 1266-8. The plates are now arranged on wood panels in what is believed to be their original form. In the fourteenth century the bronze mountings of doors were often inlaid or damascened in the style introduced from Mosul. Thus the doors of the mausoleum of Sultan Ḥasan (1356-63), perhaps the finest example in Cairo, are inlaid with gold and silver, and those of the mausoleum of Sultan Barqūq *intra muros* (1384-6) are inlaid with silver. At the beginning of the following century were fashioned the fine bronze doors of Faraj in the Great Mosque at Damascus, very simple in design compared with the gorgeous elaboration of Cairene work of the same period. Other fine examples are found in Cairo at the mosques of al-Mu'ayyad (1415-20), illustrated on Fig. 234, and of Jawhar al-Lālā (1430), see Fig. 236. Another fine pair may be seen at the mosque of the Princess Aṣal Bāy (1498-9) at Madīnat al-Fayyūm (Fig. 235). The South Kensington Museum possesses a portion of the mountings of the doors from the mosque of Bārs-Bāy (no. 1010-1897, late fourteenth century) at al-Khānqāh north of Cairo, including a very heavy knocker of coarse design, the remainder of the plating consisting of the usual light open-work. This example is, however, attributed to the eighteenth century.

¹ Lane-Poole, *op. cit.*, pp. 223-5.

Iron was occasionally used for door-mountings. A very beautiful specimen is illustrated by Migeon.¹

Though lamps of enamelled glass were frequently used during the fourteenth century in the mosques of Cairo, bronze lamps are sometimes found in later work. These generally assumed one of two forms. There is an example of the first type at South Kensington (no. 109-1888), of the period of Qāyt-Bāy, made of brass, engraved, and damascened with gold and silver. It has the form of a truncated pyramid, surmounted by a bulb and finial with a hook for hanging (Fig. 231). Nashkī characters are introduced into the decoration. The total height of the lamp is nearly 6 ft. The other type is represented by several examples in the Arab Museum at Cairo, and is perhaps more correctly described as a 'lantern' or 'chandelier'. Examples of these wonderful structures from the mosques of Qāyt-Bāy and al-Ghūrī are illustrated by Lane-Poole and Gayet.² The former writer also illustrates³ a lamp of Sultan Baybars II (1309-10) of filigree silver inlay, in the same shape as was used for the lamps of enamelled glass described and illustrated later in this chapter.

The grilles used, especially for the ground-floor windows of the mosques, in mameluke times, were at first made of bronze fitted together in short sections, but in later times were cast. Many of these grilles were also made in iron or in wood, generally turned, though in a less elaborate form than the bobbins of *mushrabiyyah* lattices.

In the Arab Museum at Cairo is a very fine damascened *kursī* (no. 105 in the Ninth Hall) of brass inlaid with silver, of the fourteenth century. This is undoubtedly one of the greatest achievements of the Saracen craftsmen in metal.

There are many other examples of metalwork of the mameluke period, mostly in bronze or brass damascened, such as candlesticks, trays, bowls, ewers, boxes for the Qur'ān, and perfume-burners, used in the mosques or larger houses of Cairo, but not architectural in their character, and exhibited at South Kensington; but mention must be made of a hasp for a coffer, incised with strapwork and geometrical patterns, and damascened with silver and gold (no. 445-1887). This indicates the extraordinary care lavished on the finishing of even minor details of furniture in the Cairo buildings of the fourteenth and fifteenth centuries.

The metalwork executed by Saracen artists settled in Venice during the sixteenth century, when the Turkish conquest had put an end to the artistic tradition of the Cairo craftsmen, forms a sequel to the work already described, and may be studied at South Kensington.

¹ G. Migeon, *L'Art musulman : les arts plastiques*, fig. 195. A. Gayet, *L'Art arabe*, figs. 128, 129.

² Lane-Poole, *op. cit.*, figs. 77, 78; ³ Lane-Poole, *op. cit.*, fig. 76.

The originality displayed in the various crafts already described was even more evident in the design of the enamelled glass lamps that hung in the mosques, and the stained glass windows or *qamariyyahs* found especially in Cairo. Glass manufacture was understood by the ancient Egyptians, as also by the great empires that colonized the Middle East after them. But in the first centuries after the Arab conquest of Egypt and Syria the use of glass seems to have been restricted to glass weights (of which a large number are preserved in European museums), and to vessels used as measures of capacity. There are one or two glass objects attributed to the Fāṭimid period, including a bowl illustrated by M. Migeon,¹ but with these exceptions practically no glass of any importance is known until the end of the thirteenth century. Nearly all the surviving examples date from the fourteenth century and were found in the mosques of Cairo.

Yet we have the testimony of early writers to prove that glass-making was practised both in Egypt and in Syria. Gayet² states that the earliest glass vessels, of the Fāṭimid period, were made at Alexandria and Maṣṣūrah, but does not quote his authority. Nāṣir-i-Khusrau when he visited Cairo just before the middle of the eleventh century saw a market for glass vessels near the mosque of 'Amr. He adds that : ' They make at Cairo also, transparent glass of great purity, resembling the emerald ; it is sold by weight,' and he speaks of bottles and phials being supplied by druggists to contain their wares. This writer, curiously enough, makes no mention of glass-manufacture in Syria. On the other hand, an even earlier traveller, Muqaddasī, says that Tyre was renowned for its industry of glass vessels, and is confirmed by William of Tyre and Benjamin of Tudela, writers of the twelfth century. It is equally certain that the industry was practised at Acre, Tripoli, and Damascus in these early dates. But there is nothing to indicate that the glass mosque-lamps with which we are now concerned were made before the year 1286 (the date of the earliest known example), in either Egypt or Syria, or that enamelled glass was yet manufactured, though the Fāṭimid bowl already mentioned has rude ornament in relief.

There is a difference of opinion among the chief authorities as to the *locale* of the enamelled-glass industry from the end of the thirteenth century to its apparent collapse in the first half of the fifteenth. Those who consider that all or most of the 140 odd surviving examples were made in Cairo can produce much evidence in favour of their theory. Perhaps the strongest argument is furnished by Herz Bey, who quotes an edict of the year 1309 by which *glass-foundries* were included among the offensive trades that were banished to the outskirts of the city. He proceeds to argue that such fragile articles as glass

¹ Migeon, *op. cit.*, fig. 293.

² Gayet, *op. cit.*, p. 236.

lamps would never be obtained from abroad if they could be made in Egypt ; that the mameluke sultans would insist on such works of art being made in their own city ; and finally that there is a close connexion between the decoration of the lamps, as he proves from specific examples, and the other ornamental details of the mosques where they hung, whereas there is a distinct difference between the characteristic ornamental features of Cairo and Damascus. Prisse d'Avennes states that most of the lamps were made at Manṣūrah, but does not give his reasons for this opinion. Gayet concludes, 'from certain passages in the works of Cairo historians', that Fustāt, near Cairo, had by this time displaced Manṣūrah as the seat of the industry. Lane-Poole believes that most of the lamps were made in Cairo or Manṣūrah, and only a few at Damascus. Those writers (including Migeon, van Berchem, and Schmoranz) who believe in a Syrian origin point to the admitted skill of the glass-workers of Tyre in the twelfth century, and consider that after the ruin of that city in 1291 the industry was transferred to Damascus, where it flourished until Tamerlane sacked the latter city in 1400 and carried away all craftsmen to Samarqand. The period 1291-1400 corresponds closely with the known date of nearly all the surviving lamps, but there are at least two after 1400. Migeon replies to the theory of Herz (that such fragile vessels could not have been transported from Syria to Cairo) that there was a large export trade in glass from Syria to China, and states that important markets for export of this glass to Egypt existed at Aleppo and at Mosul.

All the enamelled glass lamps remaining to us have a close similarity of form. The neck is wide and funnel-shaped, the bowl swells towards the base, and the base consists of a pedestal or a moulding, so that when the lamp is lowered for purposes of cleaning it can stand on the ground. The height varies from 8 in. to 18 in., and is most commonly between 12 in. and 15 in. The greatest diameter is usually about three-quarters of the height. From three to six glass loops or handles are worked on the face of the bowl. These serve to hold the short brass or silver chains which meet together at a short distance above the lamp under an 'ovoid', an egg-shaped object made sometimes of wood or earthenware, or, in the best examples, of enamelled glass to match the lamp itself. Occasionally an ostrich-egg is used for the purpose. From the ovoid a long chain runs up to a tie-beam, to a wooden bracket, or to the lofty roof of the mosque. Numbers of such chains are still to be seen in every mosque in Cairo, but the majority of the many thousands of fragile lamps that once hung from them have perished with the lapse of time and the carelessness of the lamp-cleaners (*zayyāt*). From the upper rim of each lamp hooks or wires hang to support a small glass vessel containing oil and a wick. The resultant light was

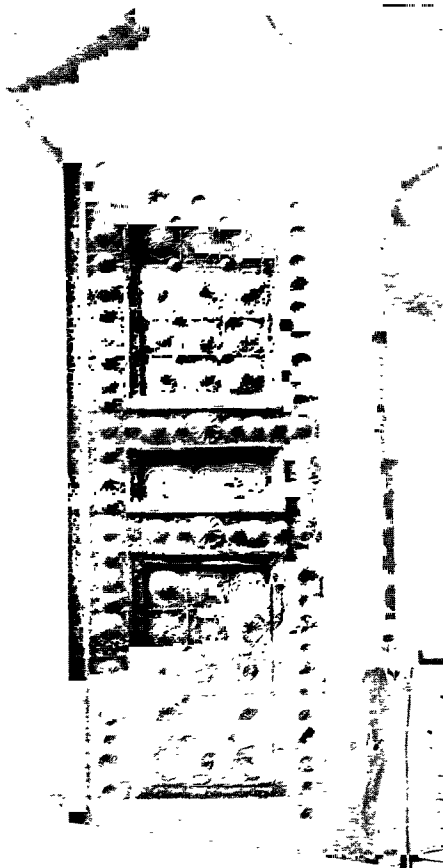


FIG. 233. DAMASCUS
Great Mosque. Metalwork on west door

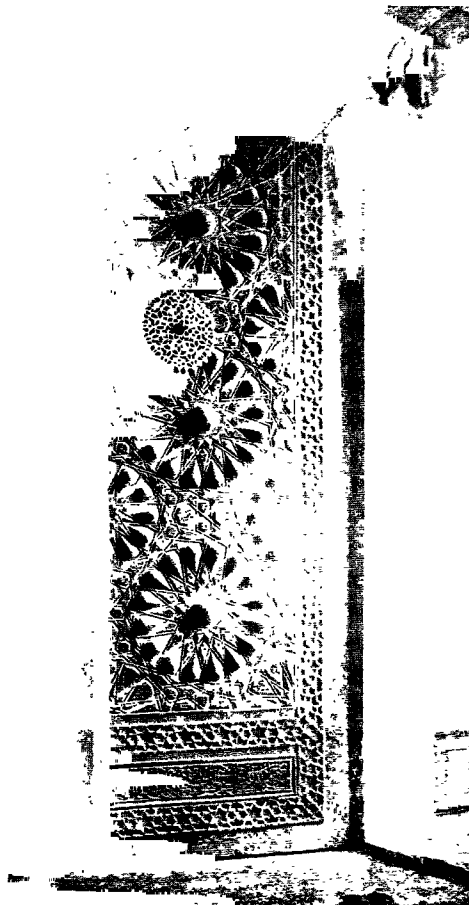


FIG. 234. CAIRO
Mosque of Mu'Ayyad Metalwork on door

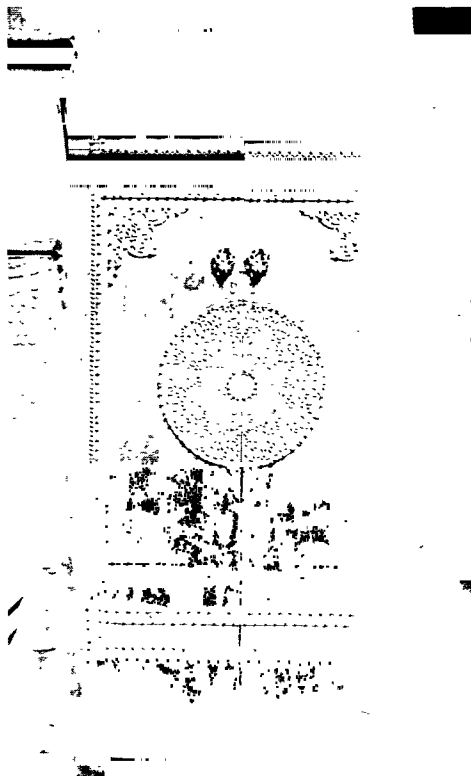


FIG. 235. MADĪNAT AL-FAYYŪM
Mosque of Princess Aḡalbāy
Metalwork on door

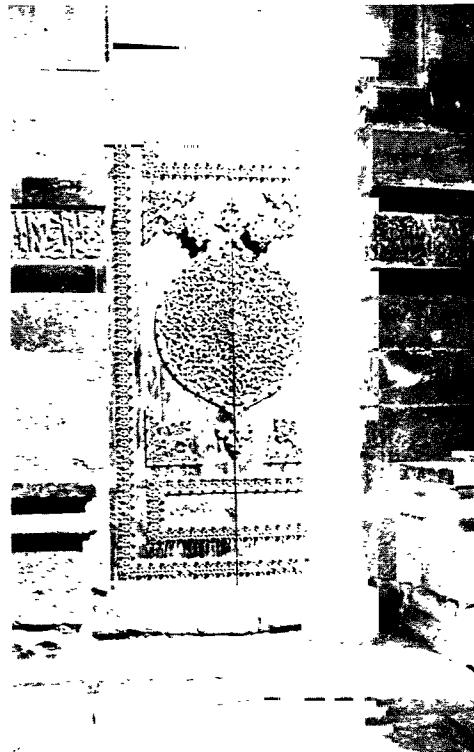
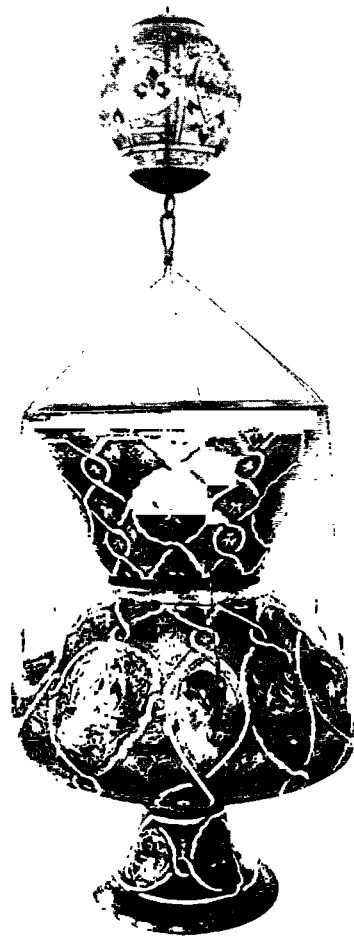
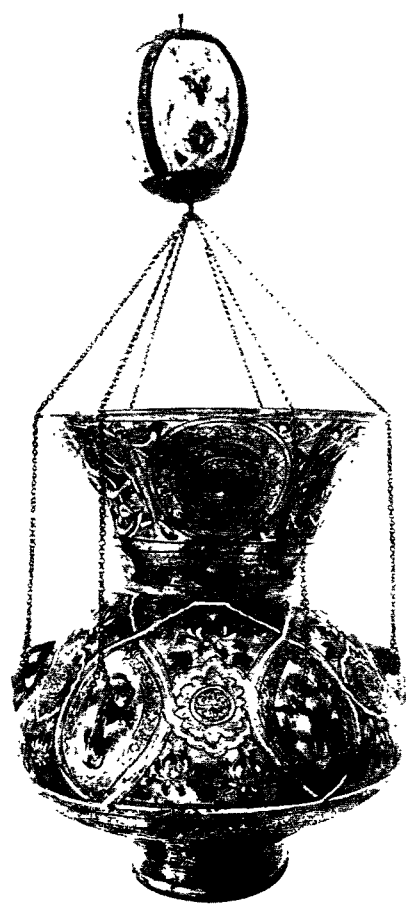


FIG. 236. CAIRO
Mosque of Jawhar Al-Lālā
Metalwork on door



FIGS. 237-40. ENAMELLED GLASS MOSQUE-LAMPS
Cairo : Arab Museum

soft and subdued, as suited the taste of the Saracen artist. The glass used showed a considerable acquaintance with the craft, but is somewhat cloudy in appearance and by no means free from bubbles. The ornament consists of inscriptions composed of texts from the Qur'ān, and of the names of the owner, or, alternatively, his armorial bearings. These form bands and medallions, and such other parts of the surface as are not left clear are decorated with very dainty arabesques. The colours used for inscriptions and arabesques are chiefly red, blue, white, and gold, occasionally green also. The lamp itself is usually of a yellowish, whitish, or greenish glass, but in some cases is a rich dark green or blue. Very fine illustrations in colour of the best of these lamps are given in the book by Schmoranz named on p. 234.

According to Artin Pāshā, writing in 1907, twenty-eight lamps (almost exactly one-fifth of the known examples) were then in England, and about an equal number in various European museums and private collections, the remainder in the Arab Museum at Cairo. Both the British and South Kensington museums have numerous fine specimens, the latter having been augmented in 1900 by nine enamelled lamps from the Myers collection.¹ The earliest known example, dated 1286, was recently at South Kensington in the loan collection of Mr. J. Pierpont Morgan. At Cairo is another dated 1293. Almost all the remainder are of the fourteenth century. Cairo possesses thirty-four from the mosque of Sultan Ḥasan, and eighteen from that of Sultan Barqūq.

From the earlier part of the fifteenth century at least two examples are known, but by the end of the century the art appears to have died, and lamps of inferior craftsmanship and design were imported to Cairo from Venice. In the days of Qāyt-Bāy and al-Ghūrī lanterns or chandeliers of bronze often took the place of lamps in enamelled glass, and in addition to the latter many examples are preserved of smaller lamps in clear white glass, following their form but not their ornament.²

The use of stained glass for windows in Egypt and Syria differs radically from the practice in mediaeval Europe. The *qamariyyah* ('moon-like') or *shamsiyyah* ('sun-like') was not exactly a window in our sense of the word. It consisted of a slab or plate of plaster (often set in a wooden frame) pierced with a number of small holes, in each of which was a piece of coloured glass. These windows were used both in mosques and houses, in the latter case especially as small upper lights in the projecting bays of *mushrabiyyah*. Their object, as in the use of *mushrabiyyah* lattices and enamelled lamps, was to reduce the glare of light, and in nearly all designs the area of the solids exceeds that of the voids. The effect is thus a series of jewels of coloured light

¹ S. K. M., Nos. 321 to 327, 329, 330-1900.

² S. K. M., Nos. 331, 332-1900.

in an opaque setting. This effect is difficult to imagine from examples exhibited at South Kensington, for the power of Eastern sunshine has to be allowed for. It may best be appreciated in some of the later tomb-mosques of Cairo, where the lower windows are shuttered, and the only light that enters the building comes through an entrance-door, itself probably in shadow, and through an upper range of these stained-glass windows. There one can realize the subdued tones aimed at by the Saracen craftsman. The patterns are so minute, and the perforations so small, that, although the thickness of the plaster plate is only half an inch in some cases, and the width between the perforations much less, the openings are bevelled so that they are wider on the inside than on the outside and thus the jewel of light is clearly seen from the inside. (With the same object in view, Gothic mullions were always chamfered.) The angle of the bevelling is skilfully varied according to the height of the window above the floor. The glass used was of no great merit. It abounded in flaws and bubbles. It became thinner in the later examples. Plain tints were almost always used, though sometimes, as in representations of the petals of a flower, one finds shading. The favourite colours are red, blue, yellow, maroon, and green. The designs were either floral or geometrical, often of great beauty of outline and colouring. It does not appear that glazed windows were used until the middle of the thirteenth century. The method of fixing the glass is described as follows by Herz Bey :¹

‘ In the first period, after laying on panes of coloured glass shaped according to the design pierced in the plaster, thin strips of plaster were applied round their edges to keep them in place ; the strips were made to follow the design on the opposite side. This is the oldest system ; it was practised between the middle of the thirteenth century and the middle of the fourteenth. . . . Examples may be seen in the tombs of Sultans Ṣāliḥ Najm ad-Dīn Ayyūb and Qalāwūn (thirteenth century) and the Madrasah of Salār and Sanjar al-Jāwli (fourteenth century), &c. In the second period, of which the best types are found in the monuments built in the second half of the fourteenth and in the fifteenth century, the plaster strips were no longer employed, and the panes were attached to the back of the openings by pouring on a layer of liquid plaster which flowed over the spaces between the panes and bound all together. There are still existing examples in the mosque of Sultan Barqūq [*intra muros*] and in buildings dating from the period of Qāyt-Bāy, such as the mosque of Abū Bakr ibn Muzhir, and Qajmās al-Ishāqī.’

¹ Herz Bey, *op. cit.*, pp. 4, 5

The fine stained-glass windows in the Dome of the Rock at Jerusalem,¹ inserted by Sultan Sulaymān in 1528, closely resemble the typical Cairene examples described, but are much larger, and are said to be strengthened by ribs of iron and rods of cane embedded in the stouter divisions of the tracery. The patterns are geometrical, formed of interlacing rosettes, circles, and polygons.

It is held by many writers that stained glass, as used by the Arabs, found its way from the East to Europe, but until Saracenic examples earlier than the thirteenth century have been discovered and dated, this seems an unwarrantable assumption, though fascinating enough to the theorist.

The subject of *faïence* in Egypt has recently found an historian, M. Claude Prost, who has described all known architectural examples.² Unfortunately the scope of his book does not include the many interesting examples in Syria and Palestine. But he does not touch on the origin of ceramic art in Egypt, a question which has long puzzled all writers on the decorative art of the Saracens. Centuries before any of the dated examples described below were made, glazed tiling was used in buildings. Thus in the Dome of the Rock at Jerusalem is a mutilated inscription formed of yellow letters on a dark-green ground in enamelled tiling bearing a date corresponding to A.D. 1027.³ Writing in 1154, Idrīsī describes at second-hand the Great Mosque of Damascus, and mentions enamelled tiling there.⁴ Speaking of Egypt in particular, Dr. A. J. Butler⁵ comes to the conclusion that :

‘ . . . The ceramic art of the Nearer East (including Persia for at least one of its main departments) had its originating source and centre in Egypt ; there the art of making fine porcelain arose, the art of enamelling in lustrous colours, and the art of embellishing wall-surfaces with glazed and painted tiles. These arts, moreover, had attained to such splendour at the beginning of the eleventh century in Egypt that they must have been practised there for centuries before, and must go back—in the forms now familiar—to at least the tenth century.’

Martin, in a recent article,⁶ upholds the view of Butler and Fouquet—that lustre pottery had an Egyptian origin—and points to the Coptic character of the ornament in early examples. Gayet also believes in the Egyptian origin of much of this art. These writers quote early

¹ Illustrated in M. de Vogüé, *Le Temple de Jérusalem*, plates 24, 25, 26. *under the Moslems*, p. 125.

⁴ *Ibid.*, p. 238.

² See Bibliography at end of this chapter.

⁵ See Bibliography at end of this chapter.

³ Translated by Le Strange, *Palestine*

travellers in support of their theory. Nāṣir-i-Khusrau, in the second quarter of the eleventh century, describes the pottery of Cairo :

‘At Maṣr glazed ware of every kind is made ; some of it so delicate and pellucid that a hand laid upon a vase may be seen through the sides. There they make bowls, cups, plates, and other vessels, and decorate them with colours like those of the fabric called *bucalinum* ; the tints change with the position occupied by the vase.’

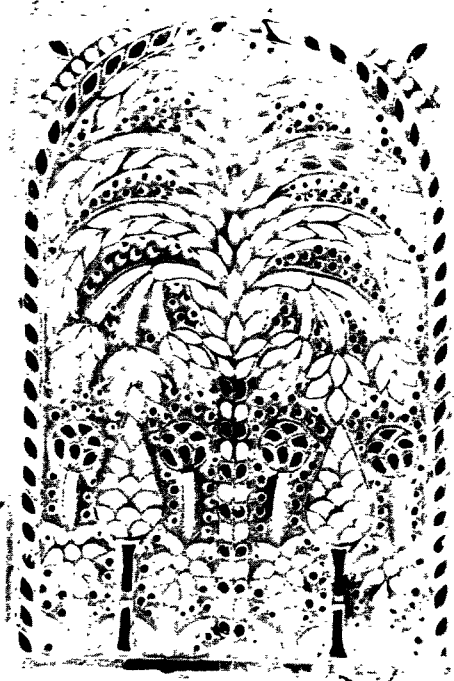
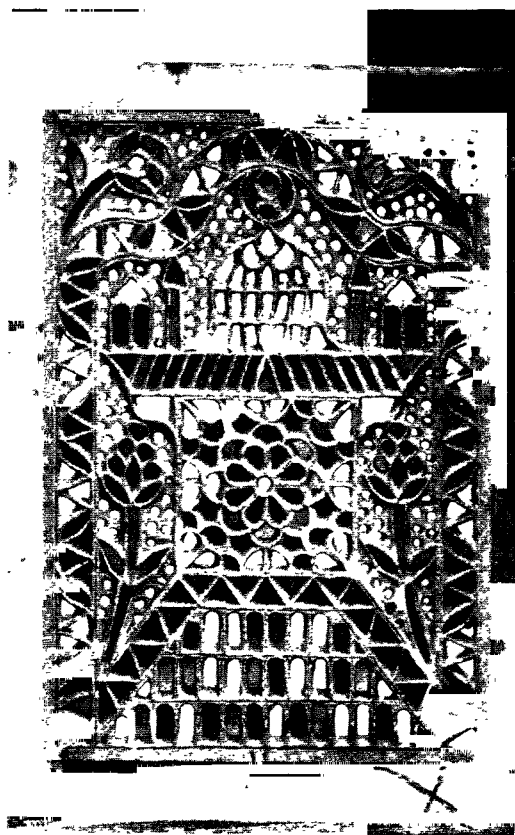
‘Alī of Herat, writing in 1173, described lustre-tiles that he saw in the mosque of al-Aqṣā at Jerusalem, the work of ‘Abdallāh son of Ḥasan of Cairo. And M. Migeon, who disputes the Egyptian origin of this art, considers that the oldest pottery discovered at Fuṣṭāṭ near Cairo is Fātimid work of the tenth or eleventh centuries.

The same writer, in his preface to Rivière’s magnificent work on early Muslim ceramics,¹ attributes the origin of all early pottery in the Near East to Sasanian Persia, though admitting that we know something of Byzantine ceramics and nothing of contemporary pottery in Persia. He ascribes the tiled *mīhrāb* at Qayrawān to the end of the ninth century and to a craftsman of Baghdād (in opposition to Dr. Butler’s view¹), and bases his argument chiefly on the fine series of examples found at Raqqah in Mesopotamia and illustrated by Rivière. He also mentions similar examples from Sāmarrā and Susa in Mesopotamia, and from Bahnasā in Middle Egypt. One example from Fuṣṭāṭ, illustrated by Rivière, is a dish decorated with ducks holding grapes in their beaks, of distinctly Byzantine character. Gayet states that he found fragments of pottery made of Persian clay at Fuṣṭāṭ. These he believes to have been used as models, for he also found other examples made of Egyptian clay, of better craftsmanship in his opinion.

The question of the first origin of glazed earthenware in Egypt and Syria is thus very difficult to decide. It is enough to know that the excavations of Fuṣṭāṭ have yielded a large collection of glazed pottery in a great variety of colour and design, dating from the tenth or eleventh century onwards. Numerous specimens are exhibited in the South Kensington and British museums, and others are illustrated in Rivière’s fine coloured plates.

In Egypt the earliest surviving examples of *faience* architecturally used date from the period 1318–48. The most important and the oldest is found on the two minarets of the mosque of Sultan Muḥammad an-Nāṣir in the Citadel at Cairo. The domed tops are covered with emerald green *faience*. A little lower is a deep band of blue *faience* with an

¹ See Bibliography at end of chapter.



FIGS. 241-4. STAINED GLASS WINDOWS FROM CAIRO
London: Victoria and Albert Museum

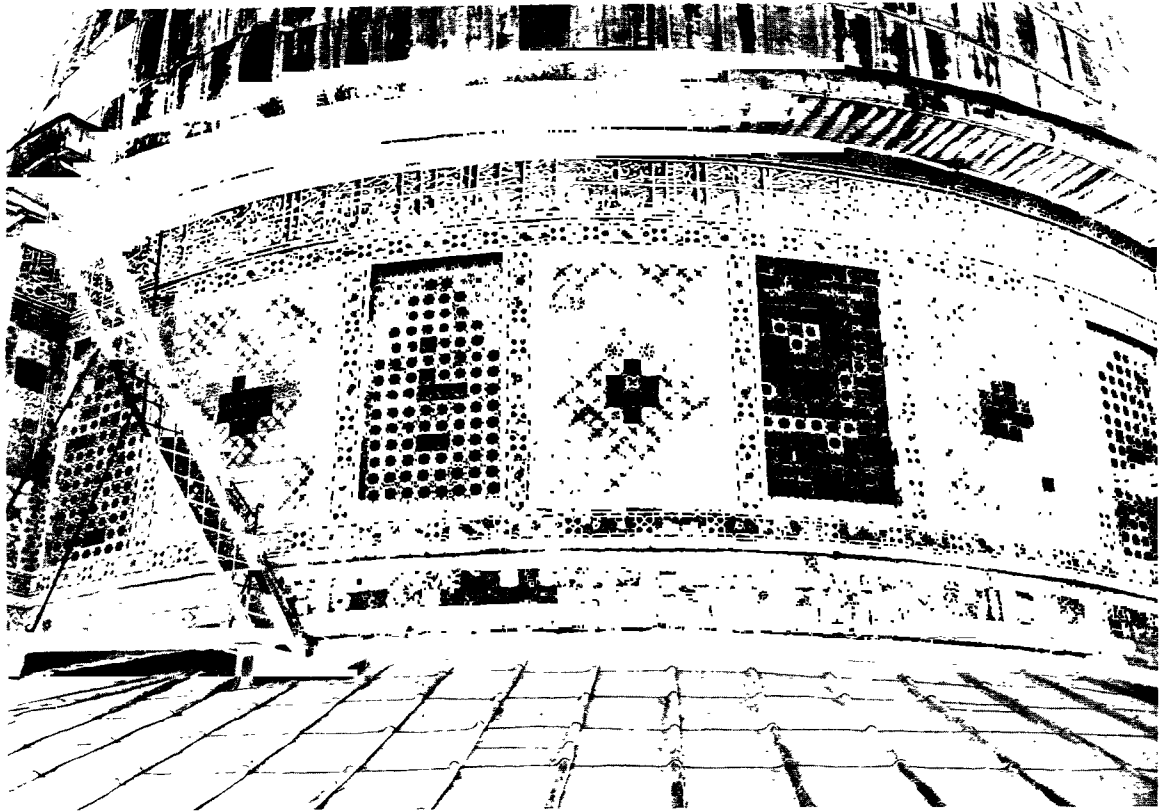


FIG. 245. JERUSALEM: QUBBAT AŞ-ŞAKIRAH 'DOME OF THE ROCK'.
Tiling round drum of dome

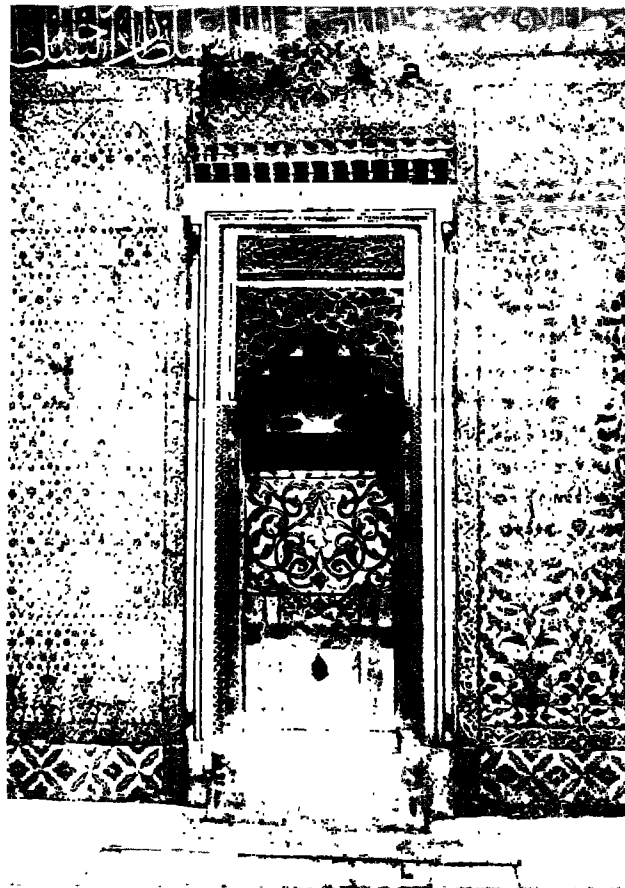


FIG. 246. DAMASCUS: A TILED FOUNTAIN

inscription of large white *naskhī* characters in white *faience*. There are other details and mouldings, including stalactites, in green, white, and blue. In the mosque of al-Māridānī, pierced panels over the entrance-doors are covered with *faience* bedded on plaster and strengthened with wooden rods. In the mausolea of the Amīr Ṭashtimur, of the Amīr Aṣlam al-Bahā'ī, and of the Princess Ṭoghāy, bands of inscriptions in *faience* are used round the base of the domes. In the first example green *faience* is used, in the second a white ground with an inscription in dark brown, and in the third a brown ground with white letters and green foliage between. This type of *faience* was made in small pieces, each of one colour, and used as a mosaic. It is generally agreed that it was made in Egypt, probably in or near Cairo. A similar technique is found in Persia and also at Konia. Both the architectural style and the technique indeed suggest a foreign origin, and it may be concluded that foreign craftsmen were employed, there being practical difficulties in the way of doing such work anywhere but near the site, accurate measurements being required.

There follows a long interval before the next examples are reached. These consist of *faience* in the form of plaques or square tiles, made locally between the years 1495 and 1545. Often these formed a tympanum over a door or window, filling up the space between the lintel and the relieving arch. The ornament is usually blue on a white ground. Hexagonal tiles of these colours are found lining a *mihrāb* niche and the adjacent walls in one case. The mausoleum of al-Ghūrī had a band of *faience* round the dome, with white *naskhī* letters and foliage on a blue ground. In another case a band of tiles round a dome is secured by nails with large heads, one nail in the centre of each tile. The beautiful mausoleum of the Amīr Sulaymān (1544-5) in the Eastern Cemetery has a band formed of two courses of blue tiles bearing an inscription in white letters, and in the neighbouring mausoleum of the Amīr Razmak (1503-5) there are oval ornaments formed of turquoise-blue enamel in the centre of each of the floral ornaments carved on the dome. During this period it is known that tiles were being made in Damascus, and it is possible that some of these were sent to Egypt.

After an interval of over a century we find wall-tiles again in use in Cairo, in the thirteenth-century mosque of Aqsunqur restored by Ibrāhīm Āghā in 1652. In this case they were employed on such a large scale that the building has become known to tourists as the 'Blue Mosque', from the colour and profusion of the *faience* that covers the *qiblah* wall. Here there is a definite design executed in square tiles. The chief feature of the design on either side of the *mihrāb* is a large panel with a vase in the centre, from which spring flowers and foliage. A lamp is also represented in the foliage, and two cypress

trees flank the panel on either hand. All these forms had a symbolical significance. The character of the technique shows a great advance on earlier (local) examples, but the effect is too definitely blue in tone to be an artistic success. The *mihrāb* wall of the adjoining tomb-chamber is also covered with blue tiling arranged in panels somewhat similar to that just described. The *faïence* of the 'Blue Mosque' exactly resembles another example, the Yeni Valide mosque in Constantinople, and was imported from Turkey, probably from Iznik (the ancient



FIG. 247. JERUSALEM: 'DOME OF THE ROCK'.
A SPECIMEN TILE. After Richmond

Nicaea) in Asia Minor, which was the chief seat of this industry till it was replaced by Kūtāhiyah. The mosques of Āthār an-Nabī in Cairo (rebuilt in 1660-1 by Ibrāhīm Āghā) and that of as-Sīnī at Girgā (1774-5) contain wall-tiling similar to that of the 'Blue Mosque'. In the Girgā example the tiles are fixed by a nail through the centre of each. Other examples of Turkish tiles in Cairo are found in the mosque of al-Fakahānī. The *sabīl-kuttāb*, or combined public fountain and boys' school that forms so picturesque a feature in the Cairo streets, was frequently lined with *faïence*. The best examples still remaining are the sabils of Yūsuf

Āghā al-Ḥabashī (1677-8), of the Amīr 'Abd ar-Raḥmān (1744-5), and of Sultan Maḥmūd (1750-1). In all these cases the ornament is floral on a white ground. The favourite flowers of the Turkish artist were roses, carnations, tulips, poppies, marguerites, cyclamens, and peonies. The use of a rich red in the colouring differentiated his work from that of Cairo and Damascus, where only blue, green, and brown were the tints employed. Turkish tiles were also used on the walls of some of the larger houses of the seventeenth and eighteenth centuries.

During this period an attempt was made to imitate Turkish tiles in Egypt, but the products were inferior and have not weathered well. The best example is to be found at the mosque of Abu' dh-Dhahab (1773-4) in Cairo. *Faïence* workers were imported from Morocco and Tunis to Egypt, and among the minor examples of work attributed

to them is the *mīhrāb* of the mosque of al-'Aynī, of about the middle of the eighteenth century. From the same quarter too came several craftsmen who settled in Rosetta, and initiated there the remarkable school of *faience* in geometrical patterns that is still to be seen on the walls of mosques and houses in Rosetta and Alexandria, often in connexion with ornamental brickwork. In shape these tiles are usually polygonal. The manufacture and glaze are inferior to those of Damascus and the colours lack freshness. These tiles were called *zizizli*, and the Damascus tiles *kāshānī*, from Kāshān in Persia, a reputed home of tile-making.

The tiles made in Cairo and Damascus during the seventeenth and eighteenth centuries were bevelled at the edges, in order that the thick plaster bed behind them should provide a better fixing.

At the end of the eighteenth century even Dutch and Italian tiles were imported.

In Syria and Palestine the most famous example of *faience* is to be found on the exterior of the 'Dome of the Rock'.¹ This remarkable tile casing covers the greater part of the building and was the work of Sulaymān the Magnificent, who did so much to embellish and

fortify the Holy City. It was finished in 1528. Prior to his time the mosque was covered with marble slabs and mosaic. Glazed bricks are used to outline the windows and other architectural features, the remaining *faience* consisting of the so-called *kāshānī* tiles, which for the most part are from 8 to 10 in. square, with floral and other patterns in blue, green, black, and yellow on a white ground. Many of the tiles, however, have a blue ground, as also the fine band of white *naskhī* lettering on a blue ground three tiles deep. There are also fine tiled spandrils, where the floral pattern is designed to fill this difficult space almost as successfully as in the case of the famous Gothic stone spandrils in our own country. The foliage throughout is highly conventional, and rosettes are used in place of the naturalistic flowers favoured in Constantinople.

¹ Illustrated in M. de Vogüé, *Le Temple de Jérusalem* (Paris, 1864), plates 27, 28, and 29.

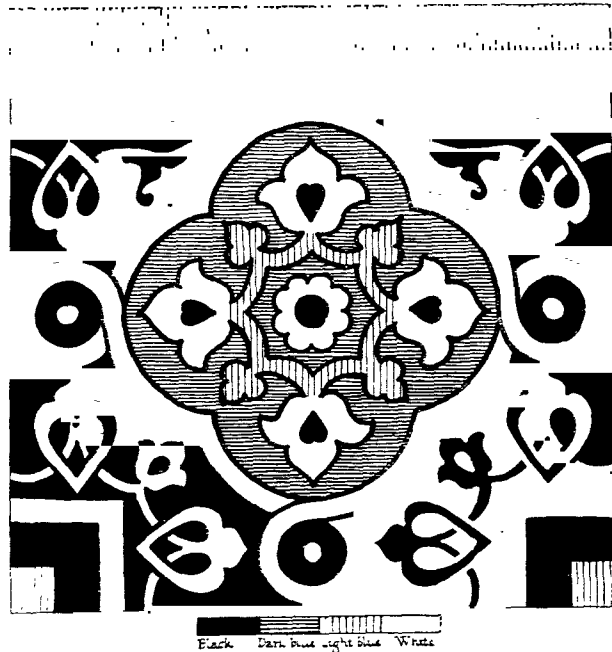


FIG. 248. JERUSALEM: 'DOME OF THE ROCK'.
A SPECIMEN TILE. After Richmond

Very similar tiles are found in the adjoining 'Dome of the Chain', bearing the date 1561.

Many of the Damascus mosques and baths contain fine examples of *faïence*, among them the Takiyyah with its beautiful tiled window heads round the large court. A magnificent collection of Damascus tiles exists in the South Kensington Museum. As a rule the ground is white, the decoration in blue and green, with a very sparing use of brown, and the size from 8 to 10 in. square. In this branch of art only, craftsmanship after the Turkish conquest of Syria and Palestine far surpassed anything that had gone before.

BIBLIOGRAPHY FOR CHAPTER XIII

General Note

See general references in list of books named on p. 183.

Metal-work

- Berchem, M. van. *Notes d'archéologie arabe : III. Étude sur . . . les cuivres damasquinés, les verres émaillés . . . &c.* Paris, 1904.
 Martin, F. R. *Ältere Kupferarbeiten aus dem Orient.* Stockholm, 1902.
 Reinaud, J. T. *Description des monuments musulmans du Cabinet de M. le Duc de Blacas.* Paris, 1828.
 Sarre and Martin. *Die Ausstellung von Meisterwerken muhammedanischer Kunst in München, 1910 ; II. Die Keramik, die Metallarbeiten, Glas und Kristall.* Munich, 1912.

Glass (Windows and Mosque Lamps)

- Artin Pāshā. *Description de quatre lampes en verre émaillées et armoriées . . . appartenant à M. J. P. Morgan . . . et déposées au South Kensington Museum.* Cairo, 1907.
 Berchem, M. van. As above. Paris, 1904.
 Day, L. F. *Windows : a Book about Stained and Painted Glass.* London, 1909.
 Gerspach, E. *L'Art de la verrerie.* Paris, 1885.
 Nesbitt, A. Notes on the History of Glass-making, in *Catalogue of the collection of glass formed by Felix Slade* (S.K.M.). London, 1871.
 Sarre and Martin. As above. Munich, 1912.
 Schmoranz, A. *Old Oriental Gilt and Enamelled Glass Vessels.* Vienna and London, 1899.
 Wallis, H. Arab Lamps, in *The Athenaeum.* London, 1887.

Faïence

- Butler, A. J. Egypt and the Ceramic Art of the Nearer East (in *The Burlington Magazine*). London, 1907.
 Deck, Th. *La faïence.* Paris, 1887.
 Fouquet, D. M. *Contribution à l'étude de la céramique orientale.* Cairo, 1900.
 Koechlin, R. *La céramique dans l'art musulman.* Paris, 1912.
 Martin, F. R. Lustre Pottery in Egypt (in *The Burlington Magazine*). London, 1910.
 Pier, C. C. *Pottery of the Near East.* New York, 1909.
 Prost, C. *Les revêtements céramiques dans les monuments musulmans de l'Égypte.* Cairo, 1917.
 Rivière, H. *La céramique dans l'art musulman.* Paris, 1913-14.
 Sarre und Martin. As above. Munich, 1912.
 Whitney, T. B. *Catalogue des anciennes faïences persanes, de Damas . . . &c.* Paris, 1910.

XIV

CONCLUSION

SOME forty years ago, when English interest in the subject of this volume was perhaps at its height, it was necessary to conclude every description of the mediaeval architecture of Cairo with a fervent appeal that the authorities in Egypt should take the necessary steps to safeguard the principal monuments from neglect, spoliation, and destruction.¹ Nowadays the need for this pathetic climax is largely removed so far as Egypt is concerned. The *Comité de Conservation des Monuments de l'Art arabe* was formed in 1881, and has since succeeded in building up an efficient organization in Cairo for the preservation of the chief architectural treasures of the country. The *personnel* of the *Comité* and its officials has always been as cosmopolitan as everything in Egypt invariably is, and the two talented architects—Herz Pāshā and Franz Pāshā—who were successively its technical advisers before the war, have now been replaced by an Italian. Professor Lane-Poole was largely responsible for the scheme on which the Committee arranged its programme, and French *savants* have contributed generously—perhaps more generously than those of any nation—to the spread of its usefulness. Whatever may be the political future of Egypt, one may therefore rest assured that an organization thus founded on the united goodwill and scholarship of the great nations, and supported also by the liberality and ability of educated Egyptians, will serve to protect from ruin all the buildings still remaining to us of a great architectural period. All monuments known to survive have been catalogued, many of them systematically photographed, and in the course of a few years this work will be completed by an exhaustive illustrated survey.² As in other countries where ancient monuments are placed under the care of the State, necessary works of repair and restoration are carried out from a sum provided by the Egyptian exchequer, and are described in an annual illustrated report of great value to students. In the case of certain buildings, chiefly domestic, that are private property, the problem is more difficult, but even these are acquired from time to

¹ See also report of Society for Protection of Ancient Buildings on *Measures adopted for the preservation of Monuments of Arab Art* (London, 1883).

² This is now (1921) being compiled by Capt. K. A. C. Creswell for H. H. the Sultan of Egypt.

time as opportunity and funds permit and are then repaired and restored so far as may be necessary. The fine Arab Museum, which was housed in its present excellent quarters in 1903, contains all the smaller works of art removed from buildings that had become ruinous or that had to be destroyed for various reasons, and also such objects as the wonderful lamps of enamelled glass described in the last chapter, which are more safely guarded in a museum than would be possible in a mosque. The whole question of restoration has always been a controversial topic in architectural circles, and any venture into ephemeral controversy would be undesirable in the present work. Nevertheless, it is perhaps permissible to add my own tribute to the taste and skill with which, in my opinion, this difficult task has been carried out in Cairo by the architects of the *Comité*.

At the time of writing, the war is still too near us, and settled conditions are still too far away, to allow of any certain forecast of the safeguards that may be provided in Syria and Palestine for the many important monuments of Muslim art in these countries. But the example of Egypt is before any nation that may eventually control the various provinces of a territory crowded with priceless relics of the past, and it is to be hoped that the Ayyūbid mosques and fountains of Aleppo, the magnificent *Haram* and the lesser monuments of Jerusalem, the many historic buildings of Damascus, the great crusader castles and churches scattered over Palestine, will finally receive the same share of attention that has recently been lavished on similar monuments in Cairo. At all events, the future of the artistic treasures of these countries is brighter than it ever could be under Turkish misrule and incompetence.

Moreover, the war, in spite of its terrible toll of destruction in most parts of the world, did afford an unexpected opportunity for British research into the architectural history of Aleppo and other hitherto somewhat neglected cities, and has had the result of arousing a new interest in the many monuments of the Near East among the hundreds of thousands of Englishmen who served through the long dreary campaigns in Egypt and Palestine and Mesopotamia. This renewal of interest in mosques and minarets reminds one that the first impetus to study of the mediaeval architecture of Egypt was in a sense the fruits of a military expedition, for Napoleon ordered the compilation of the wonderful *Description de l'Égypte*¹ that finally appeared in 1809–28 under the direction of Jomard. Although there is a tendency among archaeologists to disparage this work on the grounds of inaccuracy, it still forms a mine of information on many places that have long ago been altered or destroyed, such as the fortifications of Alexandria,

¹ M. Jomard, *Description de l'Égypte* (Paris, 1809–28), 10 folio volumes of text, ditto of plates.

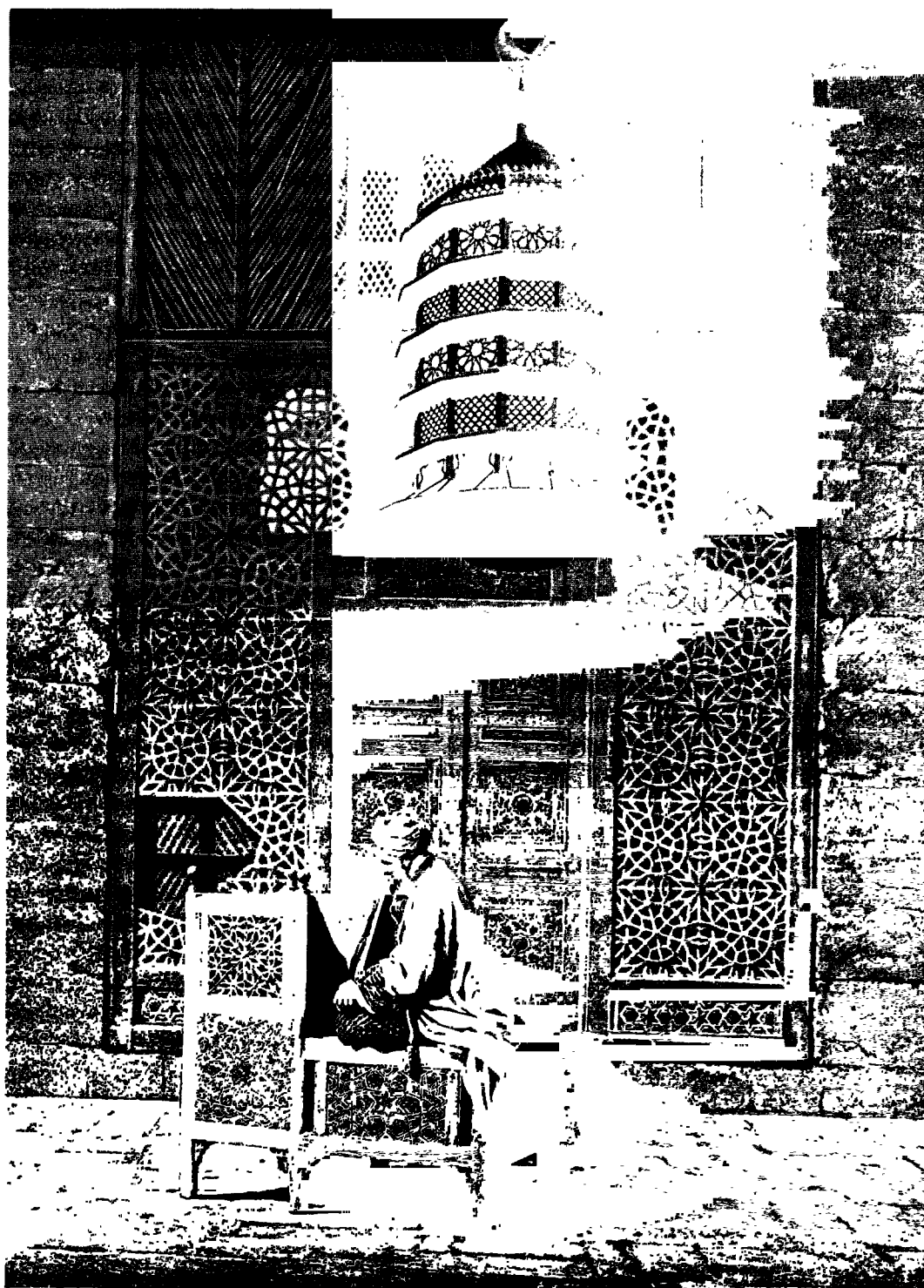


FIG. 249. CAIRO : MAUSOLEUM OF BARQŪQ AND FARAJ *extra muros*
View in sanctuary

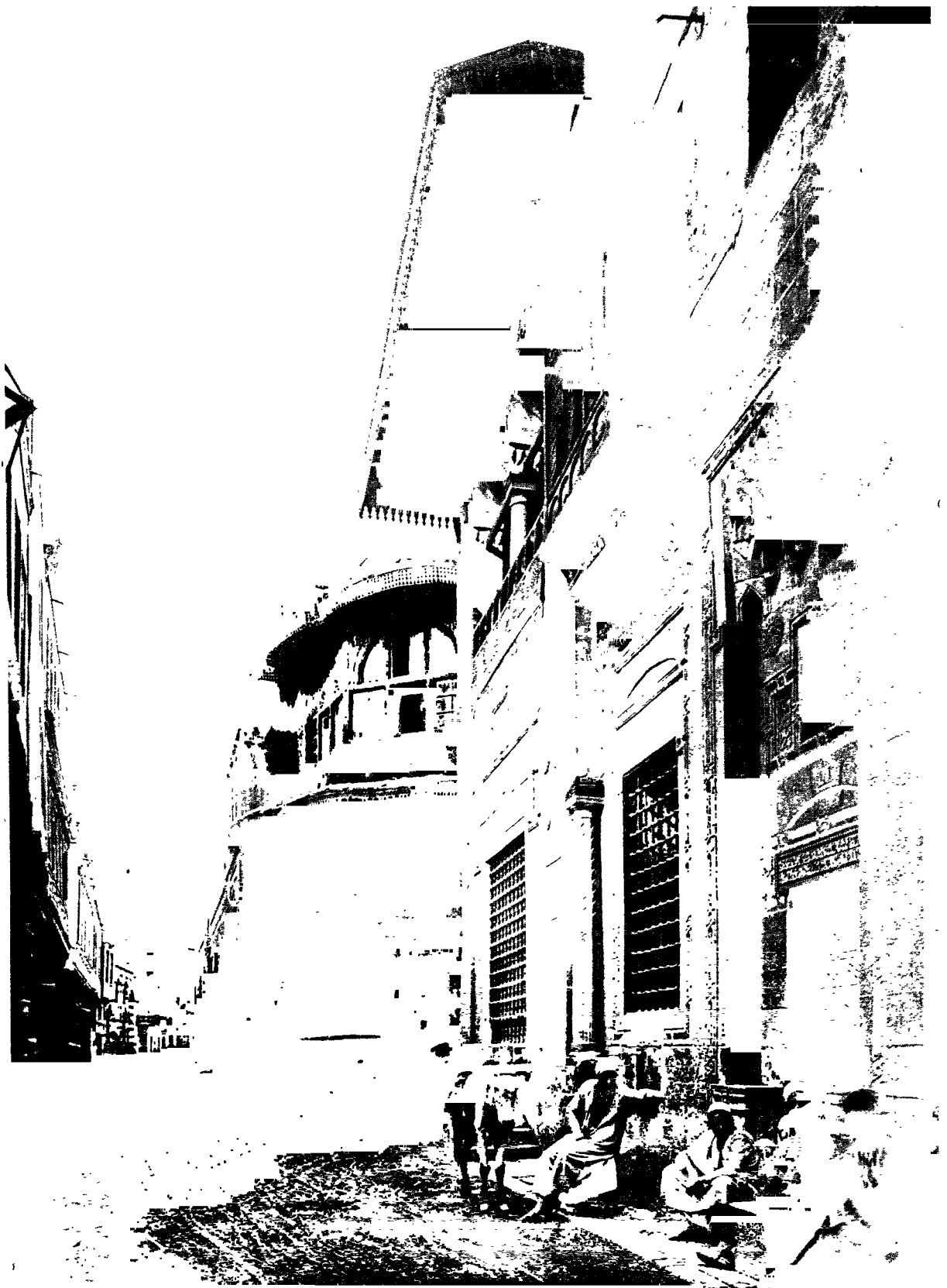


FIG. 250. CAIRO : A TYPICAL STREET SCENE

and it contains many engravings that surpass in beauty and tone all the achievements of modern photography.

This great work was followed by the important folios of Coste, Girault de Prangey, Bourgoin, and Prisse d'Avennes,¹ all, it may be noted, French scholars. These concentrated on the monuments of Cairo, and only a few buildings in Syria were included. But they furnished so large a *corpus* of examples of both architecture and craftsmanship that the next group of books was more concerned with propounding a theory of Muslim art than in merely providing illustrations. Professor Lane-Poole's handbook of *Saracenic Art*, published under the *aegis* of the South Kensington Museum in 1886, threw much light on the fine collection of specimens that he himself did so much to obtain in Cairo, and dealt in considerable detail with all branches of craftsmanship. His treatment of architecture was intentionally less exhaustive, for he stated that this should form the subject of a separate book written by some architect. His later historical and topographical works¹ have shed so much light on the connexion between the social life and the architecture of the various periods that no student can afford to neglect them. A very similar work was done for Palestine and Syria by Le Strange,¹ whose collection of travellers' tales from the writings of mediaeval pilgrims is of inestimable value for the history of the chief monuments in those countries.

These books were followed by two others which had each a definite purpose in view. The constant theme of Gayet's brilliant *L'Art arabe*¹ is the origin of all Egyptian Muslim architecture in that of the Coptic Christians, while Rivoira in his argumentative and ponderous *Moslem Architecture*¹ contends that it sprang from the monuments of Imperial Rome. By far the most complete study of the style in all countries is that of MM. Saladin and Migeon,¹ who are content, like the English architectural historian Fergusson many years before, to accept many contributory sources of origin. For this reason their work, though in some details inaccurate and incomplete, presents the most reliable guide to Muslim art that we possess. But during the past few years there has been a great increase of knowledge by reason of epigraphic and chronological researches, especially on the part of M. van Berchem. At the same time important work at Sāmarrā, Mshatta, and many of the great castles of Western Asia has been commenced and, but for the war, would have yielded even more important results than it has done. This work has been largely undertaken by German archaeologists, and has been partly included in the recent volume by Diez.¹

The present state of knowledge of Muslim architecture in Egypt and Syria is very complete as regards the mosques of Cairo, less so as

¹ See Bibliography at end of Chapter I.

to the interesting craftsmanship of the Turkish period in the cities of the Delta, and incomplete for Syria, especially as regards Aleppo—with its remarkable Ayyūbid monuments, in which Cairo is so poor—and the other cities of Northern Syria. But, within a few years, further

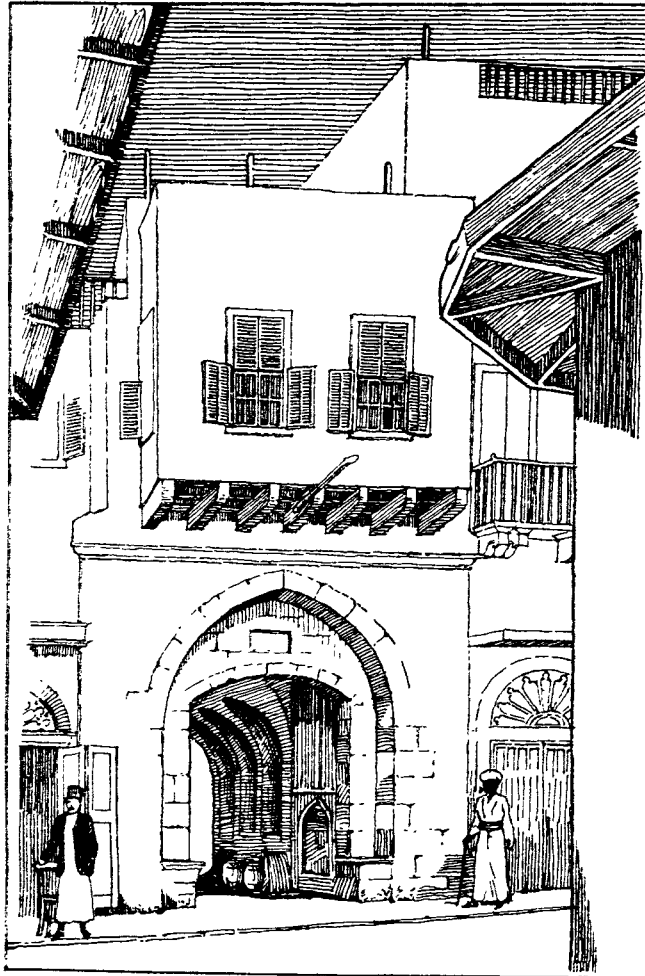


FIG. 251. ALEXANDRIA: A TYPICAL CORNER OF THE OLD TOWN. *M.S.B. del.*

research in Mesopotamia should enable us to fill the most serious gap in the history of the subject, from the primitive mosque of Muḥammad at Medina to the Great Mosque at Sāmarrā in the middle of the ninth century A. D. The ancestry of Ibn Ṭūlūn's wonderful building in Cairo may clearly be traced to Sāmarrā, but the relation of that now famous monument to the half-ruined palaces of Ukhaiḍir, Fīrūzābād, Sarvistān, Quṣayr Amra, Mshatta, and Ctesiphon, as well as to the Christian churches of Syria and the Coptic monasteries of Egypt, must remain, for some time yet, a matter for speculation.

The 'Syro-Egyptian' school of Muslim architecture may be judged as a whole from two very different standpoints. It

may be regarded from the

standpoint of its effect on, and relation to, the general current of architectural development, and by that is usually meant European architectural development. Or it may be detached for purposes of criticism, and regarded as an exotic style of building in a distant country, where the prevailing religion and the prevailing climate are very different from our own.

The influence of this architecture on the West is not very easy to trace, though there is no doubt that such an influence was exerted

during the long centuries when intercourse between Europe and the Saracens was close and frequent. It is generally admitted that, although the form of the pointed arch was known to the West in Roman times, its true structural use was borrowed from the Muslims, who employed it in the ninth century in the mosque of Ibn Ṭūlūn at Cairo.¹ The striped façades found in Italy and in Provence may have been derived from Saracenic sources, though the Arabs themselves appear to have borrowed them from the Byzantines,² so that the channel of communication may have been from Byzantium to Italy direct. The 'Mesopotamian' type of battlement used in Egypt from the ninth century in various forms was afterwards adopted in the maritime towns of Italy where Saracen influence was strongest.³ It is possible, though by no means certain, that stained-glass came from East to West, but the evidence adduced to support this theory is not at all convincing.⁴ Professor Lane-Poole is inclined to derive all our mediaeval heraldry from the blazons used by the mameluke princes in Cairo, but, as previously stated,⁵ this theory yet remains to be proved.

Migeon⁶ instances a number of decorative features and emblems found in European Romanesque architecture, especially in carved capitals and other details of churches in Southern France, which can be traced to a Saracenic origin. Among these are the *hom* or tree of life, the altar of fire, the two-headed beast, animals biting one another, the eagle with wings spread, the two-headed eagle, the griffon (borrowed from the Sasanids), the bird with a human head, the elephant, and certain floral forms. He considers that the readiness with which Romanesque artists in Europe made use of these details of Muslim art was due to their own inability to copy natural forms, as Saracenic ornament was particularly easy to copy by reason of its extreme conventionality, due to the ban of the Prophet on the representation of all living things. He also mentions the Kufic characters found occasionally in architectural decoration in Southern France, but this point should not be laboured as examples are so scarce.

In the Gothic period, Saracenic *motifs* are found in many branches of craftsmanship. The damascened copper known as 'Dinanderie', some of the silks woven on Italian looms, and especially the early examples of Italian majolica,⁷ all were derived direct from the Saracens, and so important were these schools of industrial art in the sixteenth century that it is impossible to state, as some have done, that the whole 'Arab episode' was without influence on the Renaissance and that it

¹ See pp. 56-7.

² See p. 188.

⁷ H. Wallis, *Oriental Influence on the Ceramic Art of the Italian Renaissance* (London, 1900).

³ See fig. 176a.

⁴ See p. 229.

⁵ See p. 170.

⁶ *L'Art musulman*, ii. 462-3.

'dropped out of the life of Europe' like a dream.¹ The South of Italy, in particular, abounds in proofs of the direct influence of the Saracens on architecture and craftsmanship,² and in regard to Sicily and Amalfi these factors are universally admitted.

Yet when all is said and done, this influence was for the most part limited to craftsmanship. With the single but most important exception of the pointed arch, European architecture continued on its way without being greatly affected by the art of Cairo and Damascus, and the contributions of Europe to the Muslims outweighed her borrowings from them. M. Saladin³ has drawn a parallel between the effect on the art of the conquered countries under Roman and Saracen dominion respectively. In the former case the victors only really impressed their personality, he tells us, on the barbarian nations that they subdued, while on countries already civilized—Greece, Italy, Egypt, Asia Minor—they left no mark; whereas the wild Arabs in every case moulded and adapted an artistic tradition far superior to their own. And though this may be, in a sense, the excusable exaggeration of an enthusiast, it is none the less true that one of the most remarkable aspects of Muslim architecture was its capacity for wholesale borrowing from older styles without losing its own dominant individuality. After ransacking the brains of Romans, Persians, Copts, Syrians, Byzantines, Armenians, and Crusaders, Saracenic architects continued to produce buildings which could never be attributed to any one of their heterogeneous sources of inspiration, but always retained the unmistakable stamp of Islam.

Even at the conclusion of a lengthy study of Muslim architecture in only one of its five chief provinces, it is difficult to crystallize into a few paragraphs its main characteristics and the spirit that inspired it all. The question of personal taste must always influence the critic, however unconscious he may be of any prejudice or bias, and fashions in architecture change with bewildering rapidity. It was in many respects a critical age that nicknamed our finest cathedrals 'Gothick' and could find no more pleasing adjective for mountain-scenery than 'horrid'. It is only half a century since Ruskin spoke of 'the foul torrent of the Renaissance', and persuaded most of educated England to follow his lead. With such instances in mind, I approach the task of a final verdict on my subject with the utmost diffidence. Most of the previous judgements are extreme—either unqualified eulogy or intemperate abuse—and a few are superficial and colourless. Some

¹ L. March-Phillipps, *The Works of Man* (Rome, 1904).
(London, 1911).

² H. Bertaux, *L'Art dans l'Italie méridionale*

³ H. Saladin, *L'Art musulman*, i. 43.

of the best historians of Muhammadan art have been content to state their case without pronouncing judgement, certainly the simplest solution of the problem. But apart from all fads and fancies, there still remains a certain number of architectural facts that enable us to take something like a rational view of the whole. And in so doing it must be remembered that though Saracenic art varied greatly in its far-flung sway, though strictures of the Alhambra seldom apply to the mosques of Cairo, yet the Syro-Egyptian school may be criticized as a separate entity representing the greater field covered by the architecture of Islam.

Beautiful as are many of the houses described in Chapter IX of this book, it is in the interior of the mosque that we must seek for the spirit of Muslim architecture. Here we find a building as different as possible from the Christian church. There is no 'Holy of Holies'. No screen divides the sheep from the goats, no mysterious lights glow at the distant end of a long chancel, no pure young voices rise and vibrate in a forest of vaulting far above, no cunningly-concealed organ with its *Vox angelica* moves the sentimental to tears. There are no confessional-boxes, no images, no flowers. Above all, there are no priests to come between man and his Maker. It is a very democratic place of worship where the Muslim says his prayers sometimes, though he regards them as no less efficacious if said in the middle of the desert, or in his own home. And on the whole the architectural effect of a mosque-interior is calm and peaceful, though some Europeans have found its decoration restless and others soothing. In no way does it resemble a church, for there is nothing to take the place of chancel and apse but a niche in the wall, a mere sign-post pointing to Mecca. Even in the cruciform *madrasah* with its *ṣahn* roofed over, one can feel nothing in common with the cruciform churches of Europe. The interior, then, is simple and symmetrical in its plan and arrangements.

In early examples, as we have seen, the exterior was of no account, but the Mamelukes treated their mosque-façades as objects worthy of decoration and of architectural composition. In the largest mosques the exterior grouping was often symmetrical, in the smaller examples—usually on cramped sites—it was seldom so. But it has yet to be proved that symmetry is always essential. Infinitely more important is the effective grouping of masses on any given site, and the Muslims of Cairo showed great skill in the use of a slender minaret and a sturdy dome in combination, each serving as a foil for the other. Any impartial reader studying even the small number of examples illustrated in this book will agree that in these two important respects, the planning of the interior of the mosque and the grouping of its external features, the Saracen architect was successful. It may even be hazarded that his minarets inspired the design of many an Italian *campanile*, and that by

this devious route they may have had an influence on the wonderful steeples designed by Wren and his followers in London.

In the field of architectural construction we have to allow to the Muslims the credit for the pointed arch—with all that it meant to Western architecture—but little else besides. They learned their stereotomy from Armenian masons and captive Crusaders, but they squandered much of their skill on joggled voussoirs of incredible elaboration. Their use of stalactites was quite unique, and generally skilful, but decorative rather than constructional. They used arches and domes of their own design, but they contributed nothing new to our knowledge of dome-building or of vaulting. Their architecture never possessed that magnificent sense of balanced forces that is the glory of Gothic, where vaults and arches and buttresses all rise together naked and strong. Nor has it those qualities of perfect and studied proportion that make Renaissance architecture so attractive to a trained mind, and so soulless to the crowd. There is about it, even allowing for its exotic character in our eyes, something wayward and bizarre that cannot be defined. It has none of the mouldings or carving in high relief that form so important a part of the detail of our European styles.

But the Saracens' wonderful mastery of surface-decoration largely outweighs all their shortcomings already cited. Unique in its character, it differentiates their buildings from all others, and is of the greatest importance in any judgement on their art as a whole. It has been said that European architecture is based on form, Eastern on colour¹—a dangerous though attractive generalization. In the case of Saracenic architecture it would be more correct to state that its ornament, instead of following the boldly undercut forms it assumed in Europe, was primarily intended to give texture and tone to flat surfaces. Whether the patterns used for this purpose were pierced or modelled or coloured matters little. The object was in all cases the same, to break up the dazzling glare of the sun on flat surfaces. But as the use of sculpture, as we understand it, was utterly debarred to the Muslim artist, he naturally turned to the abstract forms that his native taste for geometry suggested to him so readily. Whether in his use of these elements he intentionally aimed at producing abstraction or self-hypnotism in the mind of the beholder is a question that cannot yet be answered, but might well be solved some day by the translators of Arab theological works of the Middle Ages.

Whether all this architecture is 'restless', 'fickle', or 'weak'² is surely a matter for individual judgement. It is undeniably light-

¹ L. March-Phillipps, *Form and Colour* (London, 1915).

² L. March-Phillipps, *The Works of Man* (London, 1911).

hearted, joyous, and dainty in its temperament, if architecture be allowed to have temperament. But it is fundamentally and finally the expression of a great religious faith, it has made for itself a place in the history of art, and where it stands unharmed amid the splendid sunshine of its natural surroundings it has charmed the world with a fascination that will never die.

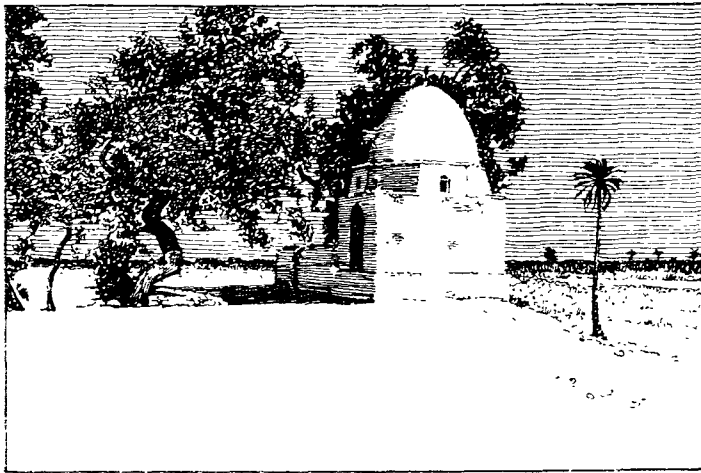


FIG. 252. PROVINCE OF FAYYŪM : THE TOMB OF
A VILLAGE SHAYKH. *M.S.B. del.*

GLOSSARY

- AMĪR. A noble in the feudal society of mediaeval Cairo, &c.
- BĀB. A gateway or doorway. (*Bāb as-sirr* = secret entrance to a house.)
- BAWWĀB. The doorkeeper of a house or mosque. (See pp. 25, 150.)
- BAYT. A house. (*Bayt al-Qāḍī* = the Qāḍī's house.)
- DABBAH. The wooden latch of a door. (See p. 149.)
- DIKKAH. A tribune or raised structure in the sanctuary of a mosque (see p. 25) from which certain parts of the service are said. A settee in a house.
- DIWĀN. A long low seat or settee, used for reclining in houses.
- DŪRQA'AH. The central portion of the *mandarah* or reception-hall in a Cairene house.
- FAWWĀRAH. The domed structure over the ablution-basin in the centre of the courtyard of a mosque.
- FISQIYYAH. A fountain in the court of a house, usually sunk in the tiled or mosaic floor. (See p. 151 and fig. 246.)
- GHURFAH. An elevated room or niche.
- HAMMĀM. A public bath; a bathroom in a private house.
- HANAFIYYAH. A fountain or basin for ablutions in a mosque.
- HARAM. A sacred enclosure (e. g. the *Haram ash-Sharīf* at Jerusalem).
- HARĪM. The family apartments of a Muhammadan house, as opposed to the public reception-rooms; hence, the women's quarters. (See pp. 152, 153.)
- HIJRAH. 'The migration,' i. e. the migration of Muḥammad from Mecca to Medina in A. D. 622, from which date the Muhammadan calendar is reckoned. (See p. 6.)
- HOSH. The courtyard of a house.
- IMĀM. A leader of Muhammadan public worship, often officially attached to a mosque.
- JĀMĪ'. A congregational mosque, consisting of a central court surrounded by covered porticoes or colonnades (*liwānāt*).
- KA'BAH. The celebrated Muhammadan shrine at Mecca.
- KHAMSĪN. 'Forty'; the forty-days' wind or sandstorm that sweeps over Egypt in the late spring.
- KHĀN. An inn or lodging for travellers, consisting of a central courtyard where merchants transacted their business, surrounded by stables for camels and other beasts on the ground floor, and by galleried lodgings for travellers on the upper floor, an arrangement resembling that of the old English coaching inns, e. g. in Southwark. (See pp. 162-3.)
- KHAZNAH. A recess for a bed in a house.
- KURSI. A table, generally a low polygonal table often richly inlaid; a rest for the large copy of the Qur'ān used in a mosque; nowadays, a chair. (See pp. 151, 215.)
- LĪWĀN (plural *Līwānāt*). One of the shaded porticoes or colonnades flanking the courtyard of a mosque; the principal *liwān* occupied the side nearest to Mecca and formed the sanctuary. (See pp. 21, 50.)
- MABKHARAH. A small tower or pinnacle on a mosque, not used like a minaret for summoning the faithful to prayer. (See p. 98.)
- MADRASAH. A collegiate mosque, usually cruciform in plan in Cairo. (See pp. 78-9.)
- MALQAF. A roof-ventilator, conducting the cool north wind down into the interior of an Egyptian house.
- MAMLŪK. (In this book spelt 'Mameluke', in its familiar anglicized form.) Literally 'a slave'; as explained on pp. 48, 89, an important personage in the feudal society of mediaeval Cairo.
- MAMRAQ. A lantern-cupola in the ceiling of the *dūrqa'ah* (q. v.).
- MANĀRAH. A minaret; the tower of a mosque, with a gallery from which the *mu'adhdhin* chants the call to prayer. (See p. 22.)
- MANDARAH. The reception-room of a Cairene house. (See pp. 151-2.)

- MAQ'AD. An open loggia or belvedere in a Cairene house. (See p. 152.)
- MAQSŪRAH. A portion of the principal *liwān* of a mosque, enclosed with screens of lattice-work or stone to form a sanctuary.
- MARISTĀN. A hospital for sick people.
- MASJID. 'A place of prostration' (in prayer); hence our English word 'mosque'. (See p. 50.)
- MAṢṬABA. A bench or seat by the doorway of a house, for the use of the *baṣṣwāb*. (See p. 150.)
- MAWĀZĪN. 'Scales'; the beautiful arcades in the Ḥaram ash-Sharīf at Jerusalem are so called, because of the popular belief that at the Day of Judgement the scales are to be suspended therein. (See p. 86 and fig. 78.)
- MAZHAB. The four rites or schools of Islam.
- MIHRĀB. The niche in the centre of the sanctuary wall of every mosque, denoting the *qiblah* or orientation towards Mecca, the point towards which Muhammadans incline themselves when praying. (See p. 21.)
- MIMBAR. The pulpit in a mosque. (See pp. 22, 215-16.)
- MINARET. See *Manārah*.
- MU'ADHDHIN. The official of a mosque whose duty it is to summon the faithful to prayer at stated hours by chanting from the gallery of the minaret. From the fact that his position commanded the jealously secluded interiors and private apartments of the Cairene houses, a blind man was usually selected for this office. (See pp. 22, 45.)
- MUFTĪ. A Muhammadan jurist who issues authoritative decisions on points of Islamic law.
- MUSHRABIYYAH. Turned lattice-work, usually of a highly ornamental character, used in Cairene houses to admit subdued light and fresh air without destroying the privacy of the interior. (See pp. 147-9.)
- OKELLE. See *Wakālah*.
- QĀ'AH. The great hall or saloon of a Cairene house. (See pp. 152-3.)
- QĀDĪ. A Muhammadan judge.
- QAL'AH. A fortress, citadel.
- QAMARIYYAH. A pierced window of stone or stucco. (See pp. 200-1, 227-8.)
- QARĀFAH. The Eastern Cemetery at Cairo, commonly known as 'The Tombs of the Caliphs'.
- QAṢR. A castle, palace.
- QASTAL. A wall-fountain in the street (e.g. at Jerusalem and Aleppo).
- QIBLAH. The direction of Mecca. (See *Mihrāb*.)
- QUBBAH. A dome; hence, a domed tomb or mosque.
- QUR'ĀN. The sacred book of Islam.
- RAB'. A block of tenement houses. (See p. 162.)
- ROSHAN. A small projecting niche in *mushrabiyyah* windows, in which porous water-jars can be kept cool.
- RŪMĪ. A (Greek) Christian in Egypt.
- SABĪL. A small and usually ornamental building containing a public fountain. (See pp. 118, 139 and figs. 141, 154, and *Frontispiece*.)
- ṢAHN. The central open court of a mosque. (See pp. 21, 28-9.)
- SĀQIYAH. A water-wheel, usually turned by a donkey or a buffalo. (See p. 146.)
- SHAMSIYYAH. A pierced window of stone or stucco. See *Qamariyyah*.
- SHIAHS. One of the sects of Islam, especially devoted to 'Ali, the son-in-law of Muhammad.
- SHISH. Lattice-work formed of fretted strips of wood, used in the towns of the Egyptian Delta, and not constructed of turned bobbins like *mushrabiyyah*. (See p. 211.)
- SIDILLAH. A recess for a *diwān* or settee. (See p. 151.)
- SUFFAH. A sideboard, usually of marble or stone with an arcaded front, in a Cairene dwelling-house. (See p. 151.)
- TAKHTABOSH. A room or alcove, usually open on one side towards the *hosh* or court, in a Cairene dwelling-house. (See p. 150.)
- TAKIYYAH. A convent of dervishes. (See pp. 135-6.)
- WAKĀLAH. (Often transliterated *Okelle*), large building, tenement house; also another name for a *khān*, q. v. (See p. 162.)
- WĀQF. A charitable trust, or religious endowment.
- WAZĪR. A minister of state.
- ZĀWIYAH. (Lit. a corner), a small mosque, tomb of a saint.
- ZAYYĀT. The official of a mosque whose duty it is to attend to the lamps. (See p. 226.)
- ZIYĀDA. An open space between the walls of a mosque and an outer enclosing wall or *enceinte*. (See p. 50.)

INDEX

A

- 'Abbāsiyyah, near Cairo, 127, 195, 201.
 'Abd al-Latif *quoted*, 92, 184.
 'Abd al-Malik, the Caliph, 33, 34, 36, 37, 38, 39.
 'Abd ar-Rahmān Katkhudā, 143.
 'Abdallāh, father of Muḥammad, 5.
 Abū Dulaf, mosque, 55, 57.
 Abu' l-Maḥāsin *quoted*, 56.
 Abu' l-Munajjā, bridge, 94, 98.
 Abū Menas, church, 15.
 Acre (Akka), 66, 82, 225.
 Crusader Church, 84, 102.
 Glassworkers at, 225.
 Adrianople, mosque of Salīm II, 140; *Fig.* 148.
 Aghurmi, mosque, *Fig.* 5.
 Aḥmad Ibn Tūlūn, 46, 48, 49, 50, 51, 52, 53, 54, 55, 56, 61, 64, 76, 170.
 'Ā'ishah, 167.
 Aleppo, 7, 11, 13, 66, 75, 77, 79, 82, 90, 95, 101, 110, 113, 114, 122, 133, 226, 236, 237.
 Citadel, 75, 87, 106, 122, 129; *Fig.* 42.
 Gates of the City, 75, 122, 125.
 Great Mosque, 66, 75, 86, 87, 216.
 Madrasah al-Ashrafiyyah, 87.
 — al-Halāwiyyah, 79.
 — Kāmiliyyah, 109.
 — al-Ma'rūf, 86.
 — ash-Shu'aybiyyah, 79.
 — al-Sultāniyyah, 86.
 — al-Zajjājiyyah, 79.
 Māristān in Jallūm quarter, 86.
 Mosque of Aṭunbughā, 106.
 — Bashīr, 140.
 — Bayāḍah, 106.
 — Ḥusayn, 86.
 — al-Kaltāwiyyah, 87.
 — al-Karīmiyyah, 98.
 — al-Khusrawiyyah, 138.
 — Manglibughā, 109.
 — Mu'allaq, 138.
 — Saffāhiyyah, 121.
 — 'Alī Shatīla, 129.
 — Shaykh Muḥsin, 86.
 — Tāwāshī, 138.
 Aleppo (*continued*):
 Qastal Akrād, 127.
 — 'Alī Beg, 129.
 — Bāb al-Maqām, 122.
 — Ramaliyyah, 127.
 — Sāḥat Bizzā, 129.
 — Sakākīnī, 109.
 — Shabaraq, 107.
 Takiyyah of Shaykh Abū Bakr, 138.
 Walls, 75, 122, 129.
 Zāwiyah of Shaykh Muḥammad al-Bazzāzī, 117.
 Alexandria, 7, 8, 14, 15, 16, 64, 77, 90, 112, 140, 141, 225, 233, 236, 238.
 Domestic architecture, 160-1, 185; *Fig.* 251.
 Fort Qāyt Bāy, 125; *Fig.* 123.
 Mosque of Abu' l-'Abbās, 141.
 — 'Alī Bāy, 141.
 — Terbana, 141, 185.
 'Alī, the Caliph, 8, 63.
 'Alī of Herat *quoted*, 230.
 Amalric, king of Jerusalem, 3, 77, 168.
 'Ammān, 11.
 Citadel, 16.
 'Amr, conqueror of Egypt, 7, 46, 48, 154.
 Ānī, cathedral, 75.
 Antioch, 7, 11, 12, 13, 66.
 'The Golden House,' 13.
 'Aqabah, 16.
 Aquitaine, 9.
 'Arabian Nights,' 9.
 Arcadius, emperor, 15, 39.
 Arculph *quoted*, 32.
 al-'Arīsh, 7, 48.
 Armenia, churches of, 13, 72, 133.
 Arsūf, siege of, 82.
 Artin Pāshā *quoted*, 227.
 Ascalon, 82.
 al-'Askar, suburb of Cairo, 48.
 Asoka, emperor of India, 17.
 Aswān, convent, 14.
 Asyūt, 161.
 Atabeg of Mosul, the, 77.
 'Athlith, 82.
 Attlee, T. S., *quoted*, 92.
 Ayyūb, father of Saladin, 76, 77.
 Ayyūbid Sultans, the, 76-87, 89.
 Azīz, the Caliph, 64, 70.

B

- Baalbek, 11, 77.
 Qubbāt al-Amjād, 87.
 — Duris, 87.
 — as-Sa'dayn, 117.
 Bābur, emperor, 137.
 Badr al-Jamālī, 65, 71, 72, 80.
 Baedeker *quoted* (see 'Franz Pāshā *quoted*').
 al-Bagawat, Necropolis, 15, 195.
 Baghdād, 4, 8, 9, 16, 22, 39, 45, 48, 54, 57, 59, 61, 74, 76, 111, 167, 216, 221, 230.
 Bahgat *quoted*, 203, 209.
 Bahnasā, 230.
 Baḥr Yūsuf, river, 81.
 'Bahrite' Mamelukes, the, 89-109, 110.
 'Banias', castle of (see 'Qal'ah Ṣubaybah').
 Bāqūm, architect, 20.
 Bāqūzah, 13.
 Barada, river, 137, 161.
 Barqūq, sultan, 113, 117, 122.
 Bārs-Bāy, sultan, 114, 120, 122.
 Basrah, 7.
 Baybars I, sultan, 86, 94, 96, 98, 110, 117, 168, 169, 222, 223.
 Baybars II, sultan, 70, 71, 91, 95, 98, 224.
 Bayt Jabrīn, 82.
 'Belfort', castle of (see 'Qal'at ash-Shaqif').
 Bell, Miss G. L., *quoted*, 53, 54, 55.
 Benjamin of Tudela *quoted*, 225.
 Berchem, M. van, *quoted*, 29, 71, 79, 127, 155, 168, 226, 237.
 Bertaux, H., *quoted*, 240.
 Besançon, 7.
 Besant, Sir W., *quoted*, 32, 33.
 Bethlehem, Church of the Nativity, 12, 14, 31.
 Bhaja, 17.
 Bilāl, the first *mu'adhdhin*, 22, 45.
 Bilbays, 7.
 Birah, Crusader Church, 83.
 Bishr, 44, 45.
 Boṣrā, 5, 11, 12.
 Arsenal, 87.
 Cathedral, 13.
 Citadel, 87.
 Mosque of al-Khidr, 87.
 — 'Umar, 87.
 — near reservoir, 98.
 Bourgoin *quoted*, 121, 165, 166, 174, 178, 210, 237.
 Briggs, M. S., *quoted*, 13, 81, 84, 85, 100, 102, 125, 137, 204.
 Brusa, 133, 134.
 'Great Mosque,' 134.
 'Green Mosque,' 134.
 Mosque of Sultan Murād, 134.
 Bukhārā, 9, 47, 48.
 Būlāq, suburb of Cairo, 77, 81, 110, 112.
 'Burjite' Mamelukes, the, 110-31.
 Butler, Dr. A. J., *quoted*, 14, 229, 230.

C

- Caesarea, 82.
 Caetani *quoted*, 30, 39.
 Cairo :
 Aqueduct, the Great, 49, 95, 102.
 — of Ibn Tūlūn, 49, 56, 185.
 Arab Museum, the, 68, 71, 160, 173, 200, 206, 214, 215, 216, 217, 218, 221, 222, 224, 227, 236; *Figs.* 189, 190, 191, 192, 208, 209, 210, 211, 212, 213, 216, 217, 220-30, 237-40.
 Bāb al-Futūḥ, 72, 73, 189; *Fig.* 34.
 — an-Naṣr, 72, 73, 95, 104; *Fig.* 32.
 — al-Qarāfah, 125.
 — al-Wazīr, 128.
 — Zuwaylah, 72, 115, 119, 120, 126, 127, 140, 158; *Fig.* 33.
 Bath of the Amīr Bashtāk, 95, 105, 163, 180, 193; *Fig.* 70.
 Bath of al-Ghūrī, 163.
 — al-Mu'ayyad, 163, 195.
 Baths, public, 163.
 Bayt al-Qādī (see 'Palace of the Amīr Māmāy').
 Bazaars, 163.
 'Blue Mosque' (see 'Mosque of the Amīr Aqsunqur').
 Burj az-Zafar, 81.
 'Cemetery of Qāyt Bāy' (see 'Qarāfah').
 Citadel, 80, 81, 89, 94, 102, 110, 121, 128, 187, 190; *Fig.* 45.
 City walls, 72, 73, 81, 89, 110, 187.
 'Eastern Cemetery' (see 'Qarāfah').
 Fadawiyyah Mausoleum, 127, 135, 138, 195, 197, 201; *Fig.* 128.
 French Consulate, 159; *Fig.* 201.
 'Hall of Baybars' (see 'Palace of Muḥibb ad-Dīn').
 Hōsh Abū 'Alī, 185.
 House of al-Haramayn, 157.
 — Ibrāhīm al-Anṣārī, 158, 159; *Fig.* 163.
 — Jamāl ad-Dīn, 91, 157; *Figs.* 157, 158.
 — al-Jirīdiyyah, 157.
 — the amīr Khāyrbak, 157.
 — 'the Muftī,' 158.
 — Muḥammad al-Qaṣṣābī, 158.
 — Muzaffar Khān, 158.
 — Ridwān Bāy, 158.
 — Zaynab Khātūn, 157.
 Houses on the Khalīj Canal, 159; *Fig.* 166.
 Ismailia quarter, 81.

Cairo (*continued*):

- Khān al-Khalīlī, 163.
 Madrasah of Abū Bakr ibn-Muzhir, 126, 183, 228; *Fig.* 119.
 — the amir Al-jāy al Yūsufī, 96, 108.
 — the 'Amīr Kabīr' (*see* 'Madrasah of the amir Qurqumās').
 — al-'Aynī, 120.
 — Barqūq (*intra muros*), 102, 113, 115-16, 121, 180, 188, 208, 217, 223, 228; *Figs.* 3, 93, 94, 95, 96, 173, 215.
 — Barsbāy, 120-1.
 — Baybars I, 94, 97, 168, 169; *Fig.* 57.
 — Faraj, 119-20.
 — al-Ghūrī, 127-8; *Figs.* 125, 127.
 — Sultan Ḥasan, 79, 95, 96, 101, 107-8, 113, 120, 155, 156, 173, 180, 183, 190, 195, 201, 207, 216, 223, 227; *Figs.* 84, 85, 86, 87, 88, 89, 90, 199.
 — the amir Jānim al-Bahlawān, 125-6, 217; *Fig.* 118.
 — Muḥammad an-Nāṣir, 84, 95, 102, 115, 197; *Figs.* 71, 75.
 — Qalāwūn, 94, 98, 101, 115; *Fig.* 60.
 — Qānī-bāy, Amīr Ākhūr, 91, 128-9; *Figs.* 120, 121.
 — Qāyt Bāy, in the Qarāfah (*extra muros*), 45, 123-4, 201, 208; *Figs.* 114, 115, 117, 179.
 — Qāyt Bāy, at Qal'at al-Kabsh (*intra muros*), 124; *Fig.* 116.
 — Qāyt Bāy, on Rawḍah Island, 124.
 — the amir Qurqumās, 122, 129.
 — the amirs Salār and Sanjar al-Jāwli, 95, 103-4, 200, 201, 228; *Figs.* 76, 79, 182, 184.
 — Salih Najm ad-Dīn Ayyūb, 85-6, 197.
 — the amir Şargatmish or Şirgatmish, 96, 108, 173; *Fig.* 82.
 — Sha'bān, 96, 108; *Fig.* 81.
 — Zayn ad-Dīn Yūsuf, 95, 103, 104; *Figs.* 68, 73, 83.
 Maq'ad of Qāyt Bāy, 156.
 Māristān of Qalāwūn, 80, 94, 98, 99-100, 169, 214.
 Mausoleum of the Abbāsid Caliphs, 195.
 — Barqūq and Faraj (*extra muros*), 52, 113, 116, 117-19, 121, 122, 128, 196, 199, 206, 216, 218, 227; *Figs.* 97, 98, 99, 100, 101, 106, 218.
 — Barsbāy (*extra muros*), 121, 196; *Fig.* 108.
 — Baybars II, 70, 95, 104, 120, 188, 189; *Figs.* 91, 172, 174.
 — al-Ghūrī, 127-8, 231; *Figs.* 125, 126.
 — Ināl, 114, 122, 196.

Cairo (*continued*):

- Mausoleum of the amir Jānī-bak, 121, 196.
 — the amir Khāyr-bak, 129.
 — Muṣṭafā Pāshā, 94, 98.
 — Nafisah, 217.
 — Qalāwūn, 94, 98, 100-1, 102, 115, 156, 172-3, 183, 185, 195, 198, 201, 210, 218, 228; *Figs.* 60, 61, 62.
 — Qānsūh, 127.
 — the amir Razmak, 231.
 — Salih Najm ad-Dīn Ayyūb, 85-6, 98, 228.
 — the Imām ash-Shāfi'ī, 79, 111, 210, 222, 223.
 — the queen Shajar ad-Durr, 94; *Fig.* 74.
 — the amir Sulaymān, 127, 138, 196, 231.
 — the amir Tarā-bāy, 128; *Fig.* 92.
 — the amir Tashtimur, 231.
 — the princess Toghāy, 231.
 — Tūmān Bāy, 127, 195; *Fig.* 122.
 — the amir Yūnus ad-Dawādār, 116-17.
 Mosque of 'Abdallāh Pāshā, 218.
 — 'Abd ar-Rahmān Katkhudā, 143; *Fig.* 183.
 — Abu'l-'Alā, 127.
 — Abu'dh-Dhahab, 142, 232.
 — the amir Aḥmad al-Mihmandār, 95, 104.
 — Aḥmad Ibn Tūlūn, 8, 16, 42, 44, 45, 49-61, 68, 69, 70, 72, 89, 95, 97, 101, 105, 124, 171, 172, 173, 177, 179-80, 184, 189, 193, 201, 206, 207, 210, 214, 216, 238, 239; *Figs.* 20, 21, 23, 24, 25, 26, 188.
 — the amir Almās, 95, 104; *Fig.* 72.
 — Altunbughā al-Māridānī, 95, 105, 156, 183, 211, 217, 231.
 — 'Amr ibn al-'Āṣ, 23, 45-6, 61, 80, 225; *Fig.* 1.
 — al-Aqmar, 67, 73-5, 89, 180, 187, 190; *Figs.* 39, 41.
 — the amir Aqsunqur, 95, 106-7, 140, 206, 231, 232; *Fig.* 129.
 — al-'Askar, 61.
 — the amir Aṣlam al-Bahā'ī, 231.
 — Āthār an-Nabī, 232.
 — al-'Aynī, 120, 207, 233; *Fig.* 219.
 — al-Azhar, 26, 60, 66, 67-9, 70, 72, 97, 101, 124, 128, 143, 189, 198, 217; *Figs.* 2, 27, 28, 36, 105.
 — Baybars I, 52, 94, 96-7, 117, 129, 190, 194, 201; *Figs.* 52, 53, 54, 55, 56, 58, 59.
 — al-Burdaynī, 143, 198, 217; *Figs.* 151, 152, 214.
 — Dāher or Zāhir (*see* 'Mosque of Baybars I').
 — al-Fakahānī, 232.

Cairo (*continued*):

- Mosque of al-Hākīm, 52, 64, 66, 68, 69-71, 72, 97, 98, 101, 177, 185, 189, 195, 197; *Figs.* 29, 30, 31.
 — Ibn Tūlūn (*see* 'Mosque of Aḥmad Ibn Tūlūn').
 — Ibrāhīm Aghā (*see* 'Mosque of the amīr Aqsunqur').
 — the amīr Jamāl ad-Dīn Yūsuf al-Ustādār, 120; *Fig.* 185.
 — Jawhar al-Lālā, 121, 223; *Fig.* 236.
 — al-Juyūshī, 66, 71-2, 110, 185, 187, 189, 195; *Figs.* 35, 37, 38.
 — al-Malikah Ṣafīyyah, 139, 142; *Figs.* 143, 146, 147.
 — Māridānī (*see* 'Mosque of Aṭunbughā al-Māridānī').
 — Mu'ayyad, 120, 183, 206, 217, 223; *Figs.* 102, 103, 104, 234.
 — Muḥammad an-Nāṣir, 95, 101, 190, 195, 197, 198, 207, 230; *Figs.* 63, 64, 65, 66, 67.
 — the amīr Qajmas al-Ishāqī, 126-7, 228; *Fig.* 124.
 — the amīr Qūṣūn, 95, 104; *Fig.* 186.
 — Sayyidah Ruqayyah, 173, 217.
 — Shāhīn al-Khalwatī, 138.
 — the amīr Shaykhū, 96, 108, 127, 195, 216.
 — Sinān Pāshā, 138, 142; *Figs.* 138, 142.
 — Sulaymān Pāshā, 137.
 — Talā'ī' aṣ-Ṣālih, 67, 75, 222; *Fig.* 40.
 — 'Uthmān Katkhudā, 154.
 — Yahyā Zayn ad-Dīn, 122.
 — Zāhīr (*see* 'Mosque of Baybars I').
 Nilometer, 49.
 Okels (*see* 'Wakālah').
 Old Cairo; Coptic churches, 14.
 Palace of Bardaq (*see* 'Palace of the amīr Yashbak').
 — the amīr Bashtāk, 95, 155, 209.
 — the amīr Māmāy ('Bayt al-Qāḍī'), 91, 148, 156, 157, 208; *Fig.* 162.
 — the amīr Manjak as-Silāhdār, 155.
 — Muḥibb ad-Dīn, 154.
 — al-Mu'izz, 78, 187.
 — the amīr Taz, 156.
 — the amīr Yashbak, 95, 155.
 Qal'at al-Maks, 81.
 Qarāfah, or Eastern Cemetery ('Tombs of the Caliphs'), 15, 111, 117, 129, 130, 196; *Figs.* 109, 110.
 Sabīl of 'Abd ar-Raḥmān Katkhudā, 143, 232; *Fig.* 154.
 — Ibrāhīm-Bāy, *Fig.* 141.
 — Khusrāu Pāshā, 139.

Cairo (*continued*):

- Sabīl of Sultan Maḥmūd, 232.
 — Yūsuf Aghā al-Habashī, 140, 232.
 Sultaniyyah Mausoleum, 197.
 Takiyyah of Sultan Maḥmūd, 142.
 Takiyyah as-Sulaymāniyyah, 138.
 'Tomb of Monsi,' 130.
 'Tombs of the Caliphs' (*see* 'Qarāfah').
 'Tombs of the Mamelukes,' 111, 130, 196; *Figs.* 130, 131.
 Walls (*see* 'City Walls').
 Wakālah of Qāyt Bāy at al-Azhar, 163.
 Wakālah of Qāyt Bāy at Bāb an-Naṣr, 163.
 Zāwiyat al-Hunūd, 98, 197.
 Carthage, 9.
 Charles Martel, 9.
 'Château Neuf' (*see* 'Qal'at al-Ḥusn').
 Chosroes I, king of Persia, 6, 10, 16, 32.
 Chosroes II, king of Persia, 16.
 Clermont-Ganneau *quoted*, 81, 98.
 Comité, work and reports of, *quoted*, 60, 61, 98, 101, 104, 105, 120, 121, 122, 124, 125, 126, 127, 128, 141, 155, 156, 157, 158, 159, 161, 163, 204, 235-6.
 Conder, Colonel C. R., *quoted*, 32, 83, 105.
 Constantine, the Emperor, 31, 37.
 Constantinople, 8, 10, 11, 37, 133, 134.
 Hagia Sophia, 11, 31, 134.
 Turkish Mosques, 135, 136, 137, 139.
 Corbet Bey *quoted*, 49, 50, 51, 58, 60, 180, 184.
 Cordova, 9, 44, 56.
 Coste, P., *quoted*, 158, 163, 237.
 Creswell, K. A. C., *quoted*, 46, 49, 55, 59, 60, 68, 72, 75, 81, 87, 98, 102, 106, 107, 109, 119, 120, 124, 127, 142, 143, 155, 156, 157, 185, 187, 195, 235.
 Ctesiphon, 7, 16, 238.
 Cyprus, 114, 203.

D

- Damascus, 6, 7, 8, 9, 11, 12, 13, 33, 34, 39, 44, 66, 77, 79, 82, 86, 90, 94, 101, 105, 113, 133, 194, 200, 208, 225, 226, 231, 232, 233, 234, 236, 240.
 'Adiliyyah madrasah, 86.
 Basilica, 39, 40, 41.
 Bazaars, 132, 163.
 Citadel, 86, 98.
 Domestic architecture, 161-2, 200, 209, 218, 219; *Fig.* 170.
 House of 'Abdallāh Pāshā, 161; *Figs.* 168, 169.
 Khān Asad Pāshā, 162, 163, 188, 214, 215; *Figs.* 171, 177, 206.
 Khān al-Gumruk, 163.

Damascus (*continued*):

- Khān Sulaymān Pāshā, 163.
 Madrasah and mausoleum of Baybars I, 98.
 'Maison Stambouli,' 162; *Fig.* 170.
 Mosque of Darwishiyah, 142.
 — Mu'allāq, 142.
 — as-Sanjakdār, 142.
 — as-Sināniyyah, 142.
 — the Umayyads ('Great Mosque') 23, 39–44, 53, 56, 98, 125, 193, 194, 202, 205, 207, 223; *Figs.* 12, 13, 14, 15, 16, 233.
 Old French Consulate, 161.
 Palace of Mu'āwīyyah, 161.
 Panelled room, now in London, 218.
 Roman gateway, 39.
 Takiyyah of Sultan Salīm, 11, 135, 136–7, 198, 234; *Figs.* 132, 133, 134, 135, 136, 137.
 Temple, 39, 40, 41.
 'Tomb of Saladin,' 82.
 Damiatta, 77, 85, 90, 93, 112, 140.
 Domestic architecture, 160–1, 185.
 House of 'Abdallāh Bāy Bakrī, 160, 208.
 Mosque of al-Bahr, 141, 142, 185; *Fig.* 144.
 — Abu' l-Ma'ātī, 142.
 — al-Mu'īnī, 121, 122, 141; *Fig.* 113.
 — az-Za'farānī, 142; *Fig.* 139.
 Wakālah ('Okel'), 163.
 Dārūm (*see* 'Dayr al-Balah').
 Dayr al-Balah, 66, 77.
 Dead Sea, the, 11.
 'Delta' architecture, 140–1, 160, 185, 186, 191, 193, 205, 208, 210, 211; *Fig.* 165.
 Devonshire, Mrs. R. L., *quoted*, 86, 94, 102, 104, 119, 120, 142, 143, 155, 157, 158, 209.
 Dickie, A. C., *quoted*, 39, 40, 43, 187, 202.
 Diocletian, the Emperor, 39.
 Dieulafoy, M., *quoted*, 10, 12, 16, 47, 56.
 Diez *quoted*, 237.
 Diyārbakr, 221.
 Dobrée, B., *quoted*, 167, 170–1, 172, 175–6.
 Dokoun, architect (*see* 'Bāqūm').

E

- Ebers *quoted*, 156, 158.
 Edessa, 7, 12, 72.
 Edfu, 50.
 Elche (Spain); church, 56.
 Eudocia, the Empress, 31.
 Eutychius *quoted*, 40.
 Ezbek Khān, 98.
 Ezra; Church of St. George, 13, 72.

F

- Faraj, sultan, 113, 117, 119, 223.
 Farghāna, 56.
 Fāṭimah, 63, 67.
 Fāṭimid Caliphs, the, 63–75, 77, 78.
 al-Fayyūm, 64, 81; *Fig.* 252.
 Fergusson, J., *quoted*, 2, 3, 40, 74, 237.
 Firūzābād, 16, 238.
 Flury, S., *quoted*, 68.
 Forster, E. M., *quoted*, 141, 142.
 Fouquet, Dr. D. M., *quoted*, 229.
 St. Francis of Assisi, 85.
 Franz Pāshā, *quoted*, 138, 143, 157, 158, 196, 235.
 Fustāt, suburb of Cairo, 8, 48, 53, 61, 64, 78, 80, 81, 154, 178, 226, 230.
 houses at, 154.

G

- Gayet, A., *quoted*, 2, 4, 10, 16, 28, 47, 59, 69, 89, 92, 121, 124, 163, 167, 168, 169, 176, 178, 181, 191, 194, 198, 208, 224, 225, 226, 229, 230, 237.
 Gaza, 5, 66, 77, 94, 117.
 Church of St. John ('Great Mosque'), 83–4; *Figs.* 46, 49, 50.
 Khān, 163.
 Other mosques, 142.
 Gerasa, 11.
 Ghūrī, sultan, 68, 114, 127, 130, 139, 191, 198.
 Gibbon, E., *quoted*, 91.
 Girault de Prangey, *quoted*, 87, 237.
 Girgā, mosque of as-Sinī, 232.
 Godefroy de Bouillon, 3.

H

- Haifa, 82.
 Hākim, caliph, 70, 75, 169, 194, 206.
 Ḥamā, 82, 95.
 Fountain from, in South Kensington Museum, 200.
 Mosque of Abu' l-Fidā, 106.
 — al-Hayyah, 106.
 Ḥamdānids, the, 75.
 Hārūn ar-Rashīd, 9, 10, 48, 54, 57, 74.
 Hasan, sultan, 95, 106, 107, 108, 217.
 Hatra, palace, 16.
 Havell, E. B., *quoted*, 17, 47, 57, 59.
 Hawrān, 5, 11, 13.
 Hebron: Great Mosque, 83, 95.
 Heliopolis: battles of, 7, 114.
 Heraclius, Emperor, 7, 10.
 Herz Bey, *quoted*, 47, 69, 98, 108, 110, 115, 125, 143, 158, 185, 209, 210, 215, 216, 217, 218, 225–6, 228, 235.

Herzfeld *quoted*, 53, 54, 86, 87.
 Hijāz, 2, 5.
 Hīrah (*see* 'Kūfah').
 Homs, 7.
 Hulst, R., *quoted*, 186.

I

Ibn al-Aghlab, 22.
 Ibn al-Baṭā'ihī, 73.
 Ibn Duqmaq *quoted*, 52, 56.
 Ibn Iyās *quoted*, 163.
 Ibn Jubayr *quoted*, 30, 31, 39, 40, 43, 79, 80, 86, 207.
 Ibn Kathīr al-Farghānī, architect, 49, 51, 52, 53.
 Ibn Ṭūlūn (*see* 'Aḥmad Ibn Ṭūlūn').
 Ibrāhīm Aghā, 107, 144, 231, 232.
 Idrīsī *quoted*, 229.
 Ināl, sultan, 114, 122.
 Isidore of Seville *quoted*, 56.
 Ismailia, 48, 203.
 Iznīq (*see* 'Nicaea').

J

Jaffa, siege of, 82.
 Jamāl ad-Dīn, 157.
 Jaqmaq, sultan, 114, 122.
 Jawhar, 64, 67, 72.
 Jenghiz Khān, 132.
 Jerusalem, 7, 9, 11, 12, 21, 31, 32, 33, 38, 66, 67, 77, 82, 83, 84, 90, 101, 110, 113, 132, 138, 187, 194, 203, 236.
 Bāb al-Atām, 95, 106.
 Bāb al-Qaṭṭānīn, 95, 106, 155; *Fig.* 80.
 Chapel of the Virgin's Tomb, 85; *Fig.* 47.
 Church of St. Anne, 31.
 — the Ascension, 206.
 — the Holy Sepulchre, 12, 31, 206.
 — St. Mary the Virgin, 31, 34, 37, 84.
 — St. Sophia, 31.
 — St. Stephen, 31.
 Damascus Gate, 138.
 'Dome of the Chain' (*see* 'Qubbat as-Silsilah').
 'Dome of the Rock' (*see* 'Qubbat as-Sakhrah').
 'Golden Gate,' 12, 31, 33.
 Haram ash-Sharīf, 30, 31, 33, 34, 35, 37, 38, 85, 106, 123, 200, 221, 236; *Figs.* 6, 9.
 Hospital of Knights of St. John, 84.
 Madrasah of Abū Bakr Mazhar al-Anṣārī, 127.
 — Argūn Kāmīlī, 109.
 — al-Jūkandār, 107.
 — al-Keziya, 109.

Jerusalem (*continued*):

Madrasah of the amīr Tankiz, 106.
 Mawāzīn in Haram ash-Sharīf, 86, 95, 106, 127, 180; *Fig.* 78.
 Mosque of al-Aqṣā, 13, 31, 32, 33, 37, 44, 75, 85, 202, 206, 216, 220, 230; *Fig.* 11.
 — Omar (*see* 'Qubbat as-Sakhrah').
 Pulpit of Qāḍī Burhān ad-Dīn, 123, 200; *Figs.* 111, 112.
 Qasāls (wall-fountains), 82, 138; *Figs.* 44, 51.
 Qubbat as-Sakhrah ('Mosque of Omar' or 'Dome of the Rock'), 23, 30, 32-7, 85, 101, 172, 194, 201, 202, 206, 207, 220, 229, 232, 233; *Figs.* 7, 8, 10, 202, 245, 247, 248.
 Qubbat as-Silsilah ('Dome of the Chain'), 33, 35, 37, 206, 234.
 Sabīl of Qāyt Bāy, 125; *Frontispiece*.
 'Solomon's Stables,' 85.
 Streets and bazaars, 82, 138, 146.
 Walls and gates, 33, 138; *Fig.* 43.
 Jiddah, 20.
 'John the Monk,' architect, 72.
 Jomard *quoted*, 77, 81, 156, 236.
 Jordan, the river, 13.
 Justinian, the Emperor, 12, 31, 33, 37, 38, 39, 59.

K

al-Kāhirah, 64, 65, 72.
 Karli, 17.
 Kāshān, 233.
 Kaufmann, C. M., *quoted*, 15.
 Kerak, 82.
 al-Khānqāh, Mosque of Bārs-Bāy, 121, 223.
 Khān Tūmān, near Aleppo, 87.
 Khān Yūnus, mosque, 91, 117, 119; *Fig.* 107.
 Khārigah Oasis, 15, 22, 195; *Fig.* 4.
 Khayr ad-Dīn, architect, 135.
 Khorsābād, 172.
 Khurasan, 79.
 Kidron, the brook, 33.
 Kirmānshāh, 16.
 Konia, 133, 135, 231.
 Koreishites, the (*see* 'Quraysh').
 Kūfah, 7, 8, 31, 179.
 Mosque, 23, 31.
 Kūtāhiyah, 232.

L

Lājīn, sultan, 60, 91, 95, 105, 173, 201, 216.
 Lammens *quoted*, 4.
 Lane, E., *quoted*, 22, 23, 24, 25, 26, 27, 28, 145, 149, 162, 163, 186.

Lane-Poole, S., *quoted*, 2, 3, 47, 49, 50, 51, 58, 61, 65, 71, 77, 78, 79, 80, 81, 90, 91, 95, 110, 111-12, 129, 130, 150, 154, 166, 169, 173, 188, 196, 208, 209, 210, 214, 215, 221, 222, 223, 224, 226, 235, 237, 239.
 Leonardo da Vinci, 178.
 Le Strange, G., *quoted*, 50, 54, 229, 237.
 Lomas Rishi, 17.
 London : Bethnal Green Museum, 209, 218, 219.
 British Museum, 179, 221, 227.
 South Kensington Museum, 169, 200, 208, 209, 210, 211, 214, 215, 217, 218, 219, 221, 223, 224, 227, 228, 230, 234, 237 ; *Figs.* 193, 194, 231, 232, 241, 242, 243, 244.
 St. Louis of France, 93.
 Ludd : Bridge (*Jisr Jindas*), 94, 98, 168, 169.
 Crusader Church, 83, 84 ; *Fig.* 48.
 Lyons, 7.

M

Ma'arrat an-Nu'mān : Madrasah, 87.
 Maden-Khapur : copper-mines, 221.
 Madīnat al-Fayyūm : Mosque of Princess Aṣal Bāy, 125, 186, 205 ; *Figs.* 203, 235.
 Domestic architecture, 161.
 Maḥallat al-Kubrā : domestic architecture, 140, 141, 160-1, 185.
 'Maḥmūd the Kurd,' 222.
 al-Māhdī, caliph, 38.
 Mamāy, amīr, 156.
 al-Ma'mūn, caliph, 36, 221.
 al-Manshiyyah : Mosque of Sultan Ghūrī, 128.
 al-Manṣūr, caliph, 38, 54.
 Manṣūrah, 225, 226.
 Domestic architecture, 160-1.
 Manzalah : domestic architecture, 160-1, 185.
 Maqrizī *quoted*, 49, 51, 52, 56, 72, 92, 98, 155, 168.
 March-Phillipps, L., *quoted*, 166, 174, 182, 206, 239-40, 242.
 Margoliouth, D. S., *quoted*, 174-5.
 Martin, F. R., *quoted*, 229.
 Massarah, 58, 184.
 Masyaf : citadel, 87.
 Maṭariyyah, 160, 185.
 Matrūh, 64.
 Mecca, 1, 5, 6, 9, 20, 21, 23, 24, 29, 33, 40, 42, 67, 202, 203.
 'Great Mosque,' 8, 23, 29, 30, 42, 140, 180, 204.
 Ka'bah, 5, 8, 20, 29, 30.
 Well of Zamzam, 5, 30, 33.

Medina, 6, 20, 33, 163, 202, 204.
 'Great Mosque,' 20, 21, 23, 28, 42, 45, 125, 238.
 St. Menas : church (*see* 'Abū-Menas').
 Migeon, G., *quoted*, 166, 168, 169, 209, 224, 225, 226, 230, 237, 239.
 'Mirabel' castle (*see* 'Ra's al-'Ayn').
 Mismiyyah (*see* 'Phaena').
 Modestus, the Emperor, 32, 38, 206.
 Montani Effendi *quoted*, 137.
 Montaza, 203.
 'Montfort' : castle (*see* 'Qal'at al-Qurayn').
 Mosul, 77, 221, 222, 223, 226.
 Mshatta : palace, 16, 237, 238.
 Mu'āwiyah, caliph, 161.
 Mu'ayyad, sultan, 113.
 Muḥammad, founder of Islam, 1, 5, 6, 8, 13, 20, 21, 22, 23, 25, 28, 29, 30, 32, 63, 85, 166, 167, 216.
 Muḥammad II, sultan, 135.
 Mu'izz, caliph, 64, 66.
 Muqaddasī *quoted*, 43, 54, 220, 225.
 Muqattam Hills, near Cairo, 49, 71, 78, 110, 117, 148, 185, 186.
 Mustanşir, caliph, 65, 66.
 Mutawakkil, caliph, 48, 53, 55.

N

Nabī Shamwīl : Crusader church, 83.
 Nablus : Crusader church, 83, 84.
 Nasik, 17.
 an-Nāṣir, Sultan Muḥammad, 94, 95, 96, 106, 214.
 Nāṣir i-Khusrau *quoted*, 65, 154, 187, 220, 221, 225, 230.
 Nicaea, 133, 135, 232.
 'Green Mosque,' 134.
 Nicephorus Phocas, Emperor, 66.
 Nūr ad-Dīn, 75, 77, 79, 85, 129, 216.

O

Omar, the Caliph, 7, 29, 32, 33, 38.
 Osmanli Turks, 132, 133, 134, 135.

P

Palermo : La Zisa, 74, 84.
 Palmyra, 11, 12.
 Paris : *Musée du Louvre*, 169.
 Pella, 7.
 Pelusium, 7.
 Petra, 11.
 Phaena, Praetorium of, 12, 72.
 Pisa, bronze griffin at, 168-9.
 Poitiers, 9.

- Poole, R. S., *quoted*, 163.
 Prisse d'Avennes *quoted*, 74, 138, 159, 166,
 174, 180, 184, 185, 198, 200, 210, 226, 237.
 Prost, C., *quoted*, 229.

Q

- Qajmās al-Ishāqī, 127.
 Qal'ah Sim'ān : church, 13.
 Subaybah : Crusader castle, 82.
 Tibnīn : Crusader castle, 82.
 Qal'at al-Huṣn : Crusader castle, 82.
 al-Qurayn : Crusader castle, 82.
 ash-Shaqif : Crusader castle, 82.
 Qalāwūn, sultan, 91, 96, 214.
 Qalb-Lōzah, 13.
 Qaryat al-'Inab : Crusader church, 83, 84.
 Qasr ash-Shirīn, 16.
 al-Qaṭā'ī, suburb of Cairo, 48.
 Qāyt Bāy, sultan, 68, 114, 123, 127, 128, 139,
 143, 156, 173, 191, 193, 197, 199, 215,
 217.
 Qayrawān (in Tunis), 9, 63, 64, 230.
 Mosque of Sidi 'Uqbah, 8, 22, 23, 44-5, 52,
 53, 216.
 al-Qudā'i *quoted*, 52.
 Quraysh ('Koreishites'), 5, 20, 30.
 Qūṣ : Mosque of al-'Āmirī, 75.
 Quṣayr 'Amra, 168.

R

- Ramlah (Palestine), 66.
 'Great Mosque,' 83.
 'White Mosque,' 95, 105; *Fig.* 77.
 Raqqah (Mesopotamia), 230.
 Ravaisse, P., *quoted*, 68, 78, 217.
 Ravenna, 11, 37.
 Rawḍah Island, near Cairo, 124.
 Reynolds, E. F., *quoted*, 134.
 Rhodes, 114.
 Rivière, H., *quoted*, 230.
 Rivoira, G. T., *quoted*, 2, 10, 13, 15, 16, 28,
 30, 31, 36, 37, 38, 40, 42, 43, 47, 51, 54,
 55, 56, 57, 59, 69, 70, 72, 73, 195, 197,
 206, 207, 237.
 Rosetta, 90, 112, 140, 142, 199, 233.
 Domestic architecture, 160-1, 185, 189,
 193; *Figs.* 164, 167.
 House of Aḥmad Aghā, 161.
 — 'Alī al-Faṭā' irī, 161.
 — al-Mayzūnī, 160, 161.
 — Shaykh Ḥasan al-Khabbāz, 161.
 — 'Uthmān Aghā, 161.
 Mosque of 'Alī al-Mahallī, 185; *Fig.* 145.
 — Muḥammad al-'Abbāsī, 141, 185; *Fig.*
 140.

Rosetta (*continued*):

- Mosque of Shaykh Toka, 141, 185.
 — Zaghlūl, 141.
 Wakālah ('Okel'), 163.
 Ruskin *quoted*, 100.

S

- Saladin, 38, 40, 46, 67, 73, 76, 77, 78, 79, 80,
 81, 86, 90, 110, 112, 113, 129, 187, 206.
 Saladin, H., *quoted*, 2, 10, 11, 15, 28, 30, 34,
 42, 44, 47, 66, 69, 75, 98, 125, 127, 134,
 140, 141, 143, 175, 177, 188, 196, 208,
 215, 216, 237, 240.
 Sālih Najm ad-Dīn Ayyūb, Sultan, 90, 94.
 Ṣalīm II, sultan, 115, 135.
 Saljūq Turks, 66, 76, 77, 132, 133, 134.
 Sallūm, 64.
 Salonica, 134, 188.
 Samanud, 160.
 Samaria : Crusader church, 83.
 Samarqand, 9, 47, 98, 226.
 Sāmarrā (Mesopotamia), 48, 52, 230, 237.
 Malwiyyah Mosque, 16, 53-6, 58, 172, 184,
 238; *Figs.* 18, 19, 22.
 Saqqara : Monastery, 14.
 Sarvistān, 16, 74, 238.
 Schmoranz, A., *quoted*, 226, 227.
 Scott, Sir W., *quoted*, 76.
 Sens, 9.
 Shajar ad-Durr, 93.
 Shallāl (near Gaza) : mosaic pavement, 13.
 Sharka an-Haranbuli, architect, 117.
 Shiahhs, 63.
 Sicily, Saracenic architecture in, 1, 69, 84, 85.
 Sinai, 7.
 Sinān, architect, 137, 140.
 Sind (India), 9.
 Siwah (town of), 204.
 Sobernheim, M., *quoted*, 86, 87.
 Sohāj : convents, 14, 15.
 Spalato, palace at, 39.
 Spiers, R. Phené, *quoted*, 2, 3, 39, 40, 73, 158,
 159, 161, 198, 202.
 Sturgis, R., *quoted*, 181.
 Strzygowski, J., *quoted*, 171, 175, 177.
 Suakin, 112.
 Suez, 112.
 Sulaymān 'the Magnificent', sultan, 82, 137,
 142, 229, 233.
 Susa (Persia), 230.
 Sykes, Sir M., *quoted*, 132-3, 136.

T

- Tabriz, 74.
 Tā'if, 6.

Takrīt (Mesopotamia), 76.
 Tamerlane, 43, 113, 122, 226.
 Tancred of Sicily, 84.
 Tarsus, 48.
 Tartar architects in Cairo, 98, 101.
 Templars, the, 38, 82, 85.
 Thebaïd, monasteries in the, 14.
 Thebes, 15, 146, 172.
 Thénau*d* *quoted*, 154.
 Theodosius, the Emperor, 39.
 'Toron', castle (*see* 'Qal'ah Tibnīn').
 Tortosa : Crusader church, 83.
 Tourmanin, 13.
 Tours, battle of, 9.
 Tripoli (Northern Africa), 82.
 Tripoli (Syria), 66, 95, 225.
 Great Mosque, 106.
 Mosque of al-'Ajamiyyah, 106, 109.
 — al-Attār, 109.
 — 'Abd al-Wāhid al-Maghrabī, 106.
 — the amīr Aybak al-Mawṣilī, 106.
 — al-Khātūniyyah, 109.
 — al-Mu'allaq, 123.
 — Ṭailān, 106.
 Tūmān Bāy, sultan, 108, 115.
 Tunis : Mosque of Zaytūnah, 44.
 Turrah, 58, 184.
 Tyre, 82, 221, 225, 226.

U

Ukhaidir : Palace, 16, 238.
 'Uqbah, Sīdī, 44.

V

Venice, influence of Saracenic art in, 222, 224.
 Viollet-Le-Duc *quoted*, 175.
 de Vogüé *quoted*, 12, 13, 37, 38, 176, 202,
 220, 229, 233.

W

Wādī Naṭrūn : monasteries, 14.
 Walīd I, caliph, 9, 29, 39, 40, 41, 43.
 Wallis, H., *quoted*, 239.
 Wild, J. W., *quoted*, 58, 184.
 William of Tyre *quoted*, 78, 225.
 Williams, R., *quoted*, 49, 55, 58, 180.

Y

Yarmūk, Battle of the, 7.
 Yashbak, amīr, 155.
 Yūnus ad-Dawādār, 91.

Z

az-Zāhir, caliph, 65.

ANALYSIS OF - PROVISION
MATERIAL

CATALOGUED.

Central Archaeological Library,
NEW DELHI.

20081

Call No. 723.31
Bri

Author—Briggs, Martin S.

Muhammedan architecture
Title—in Egypt and Palestine;

Borrower No.	Date of Issue	Date of Return
--------------	---------------	----------------

"A book that is shut is but a block"

CENTRAL ARCHAEOLOGICAL LIBRARY
GOVT. OF INDIA
Department of Archaeology
NEW DELHI

Please help us to keep the book
clean and moving.
